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QY 361 CTTGCTCGATTACAGAGTTAGAGAGATTCCTTTAGAGCCCTATCAACAGTCACTTGAAGAT 420  
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QY 721 AGCTTAGAGAGGCAAAATGCGCAAGTTGGGTGGTTATTAATCAATTCGCTAGAGATCTA 780  
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Db 3121 AATGTAAGGCGATGATGATGTAACAAGAGCCATCAAGCTGCTGCTTTGTTATCCA 3180  
Qy 3181 GAATGGAGACAGAGATGTAACAAGAGCTTCGCTGCTGCTGCTGCTGCTATATCTC 3240  
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Qy 3301 AACCAATACAGAGAACTTAAATTTAAACTGTGAGAGAGAGAGAGATTCACACGAT 3360  
Db 3301 AACCAATACAGAGAACTTAAATTTAAACTGTGAGAGAGAGAGAGATTCACACGAT 3360  
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Qy 3421 GCTGATATGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3480  
Db 3421 GCTGATATGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3480  
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Qy 3541 TATGTAATATATCAACCAAGAGCTGTTATGTAACAAGAAATTAATTTTCCA 3600  
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Qy 3601 GAAACCGATAAGTATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3660  
Db 3601 GAAACCGATAAGTATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3660  
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Db 3661 ATAGAAATTAATCTCTTATGAGAGAAATAG 3687

RESULT 2  
US-08-448-170-7  
; Sequence 7, Application US/08448170  
; Patent No. 5723758  
; GENERAL INFORMATION:  
; APPLICANT: Payne, Jewel  
; APPLICANT: Cummings, David A.  
; APPLICANT: Cannon, Raymond J.C.  
; APPLICANT: Narva, Kenneth E.  
; APPLICANT: Steiman, Steve  
; TITLE OF INVENTION: No. 5723758e1 Bacillus thuringiensis Isolate Denoted  
; TITLE OF INVENTION: B.t. PS158C2, Active Against Lepidopteran Pests, and Genes  
; NUMBER OF SEQUENCES: 10  
; CORRESPONDENCE ADDRESSES:  
; ADDRESSEE: David R. Saliwanchik  
; STREET: 2421 N.W. 41st Street, Suite A-1  
; CITY: Gainesville  
; STATE: Florida  
; COUNTRY: USA  
; ZIP: 32606  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent in Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/448,170  
; FILING DATE:  
; CLASSIFICATION: 424  
; APPLICATION NUMBER: US 08/069,902  
; FILING DATE: 01-JUNE-1993  
; CLASSIFICATION: 424  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/759,247  
; FILING DATE: 13-SEPT-1991  
; CLASSIFICATION: 424  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Saliwanchik, David R.  
; REGISTRATION NUMBER: 31,794  
; REFERENCE/DOCKET NUMBER: M/S 102D.C1  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (904) 375-8100  
; TELEFAX: (904) 372-5800  
; INFORMATION FOR SEQ ID NO: 7:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 3684 base pairs  
; TYPE: nucleic acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: DNA (genomic)  
; US-08-448-170-7

Query Match 88.6%; Score 3266.6; DB 1; Length 3684;  
Best Local Similarity 93.4%; Pred. No. 0;  
Matches 3449; Conservative 0; Mismatches 229; Indels 15; Gaps 3;

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Db 2035 CAAGTATCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 2094  
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Db 2095 TTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 2154  
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Db 2215 TTCAATCTTATCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 2274



QY 2275 CAGAGGAAATGACGTAATTTAAAGAAATTCAGTCACTACCGGGGACTTTTAATGAG 2334  
DB 2272 CAGGAGGAAATGACGTAATTTAAAGAAATTCAGTCACTACCGGGGACTTTTAATGAG 2331  
QY 2235 TGTATCCGACGTAATTTAAATCAAAAAATAGAGAGTCGGAAATTTAAAGCTTAACTCCG 2394  
DB 2232 TGTATCCGACGTAATTTAAATCAAAAAATAGAGAGTCGGAAATTTAAAGCTTAACTCCG 2391  
QY 2295 TACCAATTAAGAGGCTAATTAAGAAATAGTCAAGATTTAGAGATTAATTAATGCTTAT 2454  
DB 2292 TACCAATTAAGAGGCTAATTAAGAAATAGTCAAGATTTAGAGATTAATTAATGCTTAT 2451  
QY 2455 AATCCGAAACATGAAACATTTGATGTTCCAGGTACCGAGTCCGATGCGCCCTTCAAGTT 2514  
DB 2452 AATCCGAAACATGAAACATTTGATGTTCCAGGTACCGAGTCCGATGCGCCCTTCAAGTT 2511  
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DB 2692 TTCAAGATTAAAGCGCAGAAAGTCATGCAAGACTAGGAAATCTGGAATTTATTGAAGAG 2751  
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DB 2752 AAACCATTAATTAAGAGAGCCTGTCTGTGTAAGAGAGAGAGAGAGAGAGAGAGAG 2811  
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DB 2812 AAACGTGAAAACTACATTTGGAACAAACGAGTATTAACAGAGCAAAAGAGAGCTGTG 2871  
QY 2875 GATGCTTATTTGTAATTTCTCAATATATATGATTAACAGCGGATCAAAATGCGCATG 2934  
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QY 2935 ATTCAATGCGGAGATTAATTTGTTCAATGATTCAGAAATTCGAGAGCTTATCT 2994  
DB 2932 ATTCAATGCGGAGATTAATTTGTTCAATGATTCAGAAATTCGAGAGCTTATCT 2991  
QY 2995 GTTATCCCGGAGTGAATTTGCGGAATTTTGAAGATTTAGAGAGTCGATTCATGCA 3054  
DB 2992 GTTATCCCGGAGTGAATTTGCGGAATTTTGAAGATTTAGAGAGTCGATTCATGCA 3051  
QY 3055 ATCTCCCTTATACGATGCGAGAAATGTCGTTAAATATGATTTTAAATATGATTAACA 3114  
DB 3052 ATCTCCCTTATACGATGCGAGAAATGTCGTTAAATATGATTTTAAATATGATTAACA 3111  
QY 3115 TGCCTGAAATGTAAGAGGCAATGATGATTAACAAGAGCACTCCGTTCTGCTCTGTT 3174  
DB 3112 TGCCTGAAATGTAAGAGGCAATGATGATTAACAAGAGCACTCCGTTCTGCTCTGTT 3171  
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DB 3172 ATCCCAAGATGAGAAAGAGTGTCAAGAGAGTTGCGCTGTGTCCGGGGCGTGGCTAT 3231  
QY 3235 ATCTCTCGTGTCAACGCTTAACAAAGAGGATATGAGAGAGGCTGTGTACGATCATGAA 3294  
DB 3232 ATCTCTCGTGTCAACGCTTAACAAAGAGGATATGAGAGAGGCTGTGTACGATCATGAA 3291  
QY 3295 ATGAGAGAAATTAACAGAGCAATTTTAAATCTGTGAAGAGAGAGAGTATCCA 3354  
DB 3292 ATGAGAGAAATTAACAGAGCAATTTTAAATCTGTGAAGAGAGAGAGTATCCA 3351

QY 3355 ACGGATACAGAAACGTGTATGATTAATCTGCAACCAAGGTACAGCAATGTAATTC 3414  
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QY 3415 CGTAAATGCTGATATGAGAGATGCAATGAAGTTGATCTACAGATCTGTTAATTAACA 3474  
DB 3412 CGTAAATGCTGATATGAGAGATGCAATGAAGTTGATCTACAGATCTGTTAATTAACA 3471  
QY 3475 CCGACTTATGAAAGAAACGTAATACAGATGTAAGAGAGATTAATCTGTAATGAC 3534  
DB 3472 CCGACTTATGAAAGAAACGTAATACAGATGTAAGAGAGATTAATCTGTAATGAC 3531  
QY 3535 AGAGGATATGTAATTTATCCACATACCACTGCTTATATGACAAAGAAATTAAGATAC 3594  
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QY 3595 TTCCAGAAACCGTAATGATATGATTTGAGATTTGAGAAACGGAAGGAAATTTATGTA 3654  
DB 3592 TTCCAGAAACCGTAATGATATGATTTGAGATTTGAGAAACGGAAGGAAATTTATGTA 3651  
QY 3655 GACAGCTGGAATTAATCTCTTATGAGAGATAG 3687  
DB 3652 GACAGCTGGAATTAATCTCTTATGAGAGATAG 3684

RESULT 3  
US-08-961-803-5  
Sequence 5, Application US/08961803  
Patent No. 6150589  
GENERAL INFORMATION:  
APPLICANT: Payne, Jewel  
APPLICANT: Cummings, David A.  
APPLICANT: Cannon, Raymond J.C.  
APPLICANT: Narva, Kenneth E.  
APPLICANT: Steilman, Steve  
TITLE OF INVENTION: No. 6150589el Bacillus thuringiensis Isolate Denoted  
TITLE OF INVENTION: B.t. PS158C2, Active Against Lepidopteran Pests, and Genes  
TITLE OF INVENTION: Encoding Lepidopteran-Active Toxins  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Jay M. Sanders  
STREET: 2421 N.W. 41st Street, Suite A-1  
CITY: Gainesville  
STATE: Florida  
COUNTRY: USA  
ZIP: 32606  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent-In Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/961,803  
FILING DATE: 31-OCT-1997  
CLASSIFICATION: 800  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/069,902  
FILING DATE: 01-JUNE-1993  
CLASSIFICATION: 800  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/759,247  
FILING DATE: 13-SEPT-1991  
CLASSIFICATION: 800  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/448,170  
FILING DATE: 23-MAY-1995  
CLASSIFICATION: 800  
ATTORNEY/AGENT INFORMATION:  
NAME: Sanders, Jay M.  
REGISTRATION NUMBER: 39,355  
REFERENCE/DOCKET NUMBER: M/S 102DCD1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (352) 375-8100

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TELEFAX: (352) 372-5800
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3684 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; US-08-961-803-5

Query Match      88.6%; Score 3266.6; DB 3; Length 3684;
Best Local Similarity 93.4%; Pred. No. 0;
Matches 3449; Conservative 0; Mismatches 229; Indels 15; Gaps 3;

QY      1 TTGACTTCAAATGAGAAAAATGAGAAATGAAATTAATAATGCTTATTCAGATTCAGCTGTA 60
DB      1 TTGACTTCAAATGAGAAAAATGAGAAATGAAATTAATAATGCTTATTCAGATTCAGCTGTA 60
QY      61 TCGAATCATTCACACAAATGAGATCTATCACAAGATGCTGTATTTGAGATTCCTTTGTCT 120
DB      61 TCGAATCATTCACACAAATGAGATCTATCACAAGATGCTGTATTTGAGATTCCTTTGTCT 120
QY      121 ATAGCCGAGGGGAAATATATATCAATCCACTTTAGCGCATCAACAGTCCAAACGGGTATT 180
DB      121 ATAGCCGAGGGGAAATATATATCAATCCACTTTAGCGCATCAACAGTCCAAACGGGTATT 180
QY      181 AACATAGCTGTGTAATGATCTAGGTGTAATAGCGGTACCGTTGCTGACAAATAGCTAGT 240
DB      181 AACATAGCTGTGTAATGATCTAGGTGTAATAGCGGTACCGTTGCTGACAAATAGCTAGT 240
QY      241 TTTTATAGTTTTCTGTGTGTGTAATTAATGCCCCCGCGGAGAAATCGATGGGAAATTTTC 300
DB      241 TTTTATAGTTTTCTGTGTGTGTAATTAATGCCCCCGCGGAGAAATCGATGGGAAATTTTC 300
QY      301 CTAGAACATGTCGACAACTTATTAATCAACAAATACAGAAAAATGCTAGAAATCGGCA 360
DB      301 CTAGAACATGTCGACAACTTATTAATCAACAAATACAGAAAAATGCTAGAAATCGGCT 360
QY      361 CTTGCTCGATTACAAAGGTTTAGAGATCTCTTTAGAGCTTATCAACAGTCACTTGAAGAT 420
DB      361 CTTGCTCGATTACAAAGGTTTAGAGATCTCTTTAGAGCTTATCAACAGTCACTTGAAGAT 420
QY      421 TGGCTAGAAAAACCGTATGATGACAGAAACGAAAGTCTTTATACCAATATATAGCC 480
DB      421 TGGCTAGAAAAACCGTATGATGACAGAAACGAAAGTCTTTATACCAATATATAGCC 480
QY      481 TTAGAACTTGATTTTCTTAATGCGATGCGCTTTTCCCAATTAGAAACGAAGTTCCA 540
DB      481 TTAGAACTTGATTTTCTTAATGCGATGCGCTTTTCCCAATTAGAAACGAAGTTCCA 540
QY      541 TTAATTAATGATATGCTCAAGCTGCAAAATTTACACCTATTTATTTAGAGATGCTCT 600
DB      541 TTAATTAATGATATGCTCAAGCTGCAAAATTTACACCTATTTATTTAGAGATGCTCT 600
QY      601 CTTTGTGTAATGATTTGGGCTTACATCGCAGAAATTTCAAGTTATTAATGAGCGCAA 660
DB      601 CTTTGTGTAATGATTTGGGCTTACATCGCAGAAATTTCAAGTTATTAATGAGCGCAA 660
QY      661 GTGGAACAAAACGAGATTTATTCGCAATTTGCGTAAGTATGATTAATACAGGCTAAT 720
DB      661 GTGGAACAAAACGAGATTTATTCGCAATTTGCGCAATGATTAATACAGGCTTAAAT 720
QY      721 AGCTTGAGAGGACAAATGCGCAGATTTGGGTGCTTATATCAATTCGCTAGAGATCTA 780
DB      721 AATTTGAGAGGACAAATGCTGAAAGTTGGTGGATATATCAATTCGCTAGAGATCTTA 780
QY      781 ACGTTAGGGGTATTAATCTTAGTGGCACTATTCGCAAGCTATGACATCGCATTTATCCA 840
DB      781 ACGCTAGAGATTAATTAATCTTAGTGGCACTATTCGCAAGCTATGACAGCGGTTATCCA 840
QY      841 ATAAATCGAGTGTCTGATTAACAAAGGAAGTTTATACAGCGCAATTTGAGCAACAGGG 900
DB      841 ATGAATTCAGTGTCTGATTAACAAAGGAAGTTTATACAGATTCCAATTTGGAGAACAAAT 900
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QY      901 GTAAAT-----ATGGCAAGTATGAATTTGGTATTAATAATATGACACTTGTTCGGCT 954
DB      901 GCACCTTCAGAAATTTGCAGATGCAAGTATGATTTAAATAATGACACATCGTTTCGCC 960
QY      955 ATAGAGATCGCGGTATTCGAAAGCCGCACTTACTGATTTTCTAGAACAACTTACAATT 1014
DB      961 ATAGAGCTGCGGTATTTAGGCTCCGCATCTTCACTTTTTCAGAACAGCTTACAATT 1020
QY      1015 TTATTAATCTGTATGATTAATCAATCTCTCGAGAGGTATATTTGACTGAATCATAT 1194
DB      1021 TTCAGGTATTAATGATGAGATTAATCAATATATGAAATTAATCTGGGGAGACATAGA 1080
QY      1075 ATTCAATCTGCGCAATTAGAGCGGATTAATATCTCAACGATGGGTCTACCAATAC 1134
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DB      1141 TCTATTAATCTGTATGATTAATCAATCTCTCGAGAGGTATTAATGAAACAGATCATTT 1200
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DB      1201 GCAAGGATTAATAT-----ACTTCACTACTCTGTGAATGAGATACCTTGGGCTAGA 1254
QY      1255 TTTAATTTTGAACCTCTCAAGATCTTTTGAAGAGTACTGTCAATTAATCAACC 1314
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QY      1315 TATGAGTCACTGGGCTTCAATTAAGAAATGCAAACTGAATTTACACAGAAACACA 1374
DB      1312 TATCTGAGATGGGACACACATTTTGAATTCAGAACTGAATTTACACAGAAACACA 1371
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QY      1435 TCTAGGTGATATACCAATATTTCTTGAAGCAGCAGGTAGTCAATGTAACAAATACC 1494
DB      1432 AACACTTTGAGACACAGATTAATTTCTGAGCGCACCGTAGTCAATGTAACAAATACC 1491
QY      1495 ATTAGTTGATATGATTAACAAATACCAATGATGTTAAATCAATCACTTAATTCAGGT 1554
DB      1492 ATTAGTTGATATGATTAACAAATACCAATGATGTTAAATCAATCACTTAATTCAGGT 1551
QY      1555 ACCTCTGATGATGAGTGCACAGATTTTACAGAGGGGATTAATCCGAATCAACGTTAAT 1614
DB      1552 ACCTCTGATGATGAGTGCACAGATTTTACAGAGGGGATTAATCCGAATCAACGTTAAT 1611
QY      1615 GGTATGTAATGATATGAGTCTTAATTTTAAATATATCAATTAACAGCGGTATCGCGTG 1674
DB      1612 GGTATGTAATGATATGAGTCTTAATTTTAAATATATCAATTAACAGCGGTATCGCGTG 1671
QY      1675 AGAGTTCGTTATGCTCTCTCAACATGATGCTGAGGGTAACTGCGAGGGGAGTACT 1734
DB      1672 AGAGTTCGTTATGCTCTCTCAACATGATGCTGAGGGTAACTGCGAGGGGAGTACT 1731
QY      1735 ACTTTTGATCAAGATTTCCCTAGTACTATGATGCAATGAGTCTTTGACATCTCAATCA 1794
DB      1732 ACTTTTGATCAAGATTTCCCTAGTACTATGATGCAATGAGTCTTTGACATCTCAATCA 1791
QY      1795 TTTAGATTTGCAAGATTTCTGTAGTATTAATGATCTGGCAGTCAAACTGCTGGAATA 1854
DB      1792 TTTAGATTTGCAAGATTTCTGTAGTATTAATGATCTGGCAGTCAAACTGCTGGAATA 1851
QY      1855 AGTATTAAGTAATTAATGAGGTATGACAAAGTTTCACTTTGATTAATTTGAATCATTTCCA 1914
DB      1852 AGTATTAAGTAATTAATGAGGTATGACAAAGTTTCACTTTGATTAATTTGAATCATTTCCA 1911
QY      1915 ATTAGTCAACCTTCGAGCAGAAATGATTTTGAAGAGGCGCAGAGCGGTGAATGCT 1974
DB      1912 ATTAGTCAACCTTCGAGAGAAATTAATTTTGAAGAGGCGCAGAGCGGTGAATGCT 1971
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1975 CTGTTTCTAATAGCAATCCAGAAAGATTGAAAACAATGTGACAGATTATCATTTGAT 2034  
1972 CTGTTTCTAATAGCAATCCAGAAAGATTGAAAACAATGTGACAGATTATCATTTGAT 2031  
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2155 CCAAACTTCACATTCATCAATTAAGCAACGACTTCATATCTACTAATGAGCAATCGAAT 2214  
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3115 TGCTGAATGTAAGAGGCAATGATGATCAACAGAGCCATGACGCTTCTGCTTGT 3174  
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3295 ATCCGAACCAATCAGAGCACTTAAATTTAAACCTGTGAAGAGAGAGTATCCA 3354  
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3595 TTCCCGAAACCGATTAAGATGATGATTAATGATGAGAAACGAGAGGAAATTTATGTA 3654  
3592 TTCCCGAAACCGATTAAGATGATGATTAATGATGAGAAACGAGAGGAAATTTATGTA 3651  
3655 GACAGCGTGAATTAATCTCTTATGAGAGATAG 3687  
3652 GACAGCGTGAATTAATCTCTTATGAGAGATAG 3684

## RESULT 4

US-09-661-322A-62  
; Sequence 62, Application US/09661322A  
; Patent No. 6593293  
; GENERAL INFORMATION:  
; APPLICANT: Baum, James A.  
; APPLICANT: Chu, Chih-Rei  
; APPLICANT: Donovan, William P.  
; APPLICANT: Gilmer, Amy J.  
; TITLE OF INVENTION: Lepidopteran-Active Bacillus thuringiensis Delta-Endotoxin Compo  
; FILE REFERENCE: MECO201  
; CURRENT APPLICATION NUMBER: US/09/661,322A  
; CURRENT FILING DATE: 2000-09-13  
; NUMBER OF SEQ ID NOS: 63  
; SOFTWARE: PatentIn version 3.0  
; SEQ ID NO 62  
; LENGTH: 3684  
; TYPE: DNA  
; ORGANISM: Bacillus thuringiensis  
US-09-661-322A-62

Query Match 88.4%; Score 3260.2; DB 4; Length 3684;  
Best. Local Similarity 93.3%; Pred. No. 0;  
Matches 3445; Conservative 0; Mismatches 233; Indels 15; Gaps 3;  
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Dh 1 TTGACTTCAAAATGAAAAATGAAATGAAATTAATTAATTCCTTATCGATTCCAGCTGTA 60  
Qy 61 TCGAATCATTCACACAAATGATGATCTATCAACAGATGCTGTATGAGATTCCTTGTGT 120  
Dh 61 TCGAATCATTCGCCACAAATGAAATCTATCAACGATGCTGTATGAGATTAAGCTTGTGT 120  
Qy 121 ATAGCGAGGGGAATTAATATCAATCCATCTGTATGCGCATCAACAGTCCAAACGGGTATT 180  
Dh 121 ATAGCGAGGGGAATTAATATCAATCCATCTGTATGCGCATCAACAGTCCAAACGGGTATT 180  
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Dh 241 TTTTATATGTTTTCTGTGTGATTAATAGCCCCCGCGGAGAGATCAGTGGGAATTTTC 300  
Qy 301 CTAGAACATGTCGAAACATCTTATATAGCAACAAATTAACAGAAAATACTAGGATACGGCT 360  
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Qy 361 CTGTGCTGATTAACAAGGTTTAGAGATTCCTTATAGGCTTATCAACAGTCACTTGAAGAT 420  
Dh 361 CTGTGCTGATTAACAAGGTTTAGAGATTCCTTATAGGCTTATCAACAGTCACTTGAAGAT 420  
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Qy 541 TTATTAATGATATGCTCAAGCTGCAAGTCAATTAACCTTATATATGAGATGCTCT 600  
Dh 541 TTATTAATGATATGCTCAAGCTGCAAGTCAATTAATATATGAGATGCTCT 600  
Qy 601 CTTTGTGTATGATATTTGGGCTTACATCGCAGAAAATTCACGTTATTAATGAGCGGCA 660  
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Dh 721 AATTTGAGAGGCAAAATGCTGAAGTTGGGTGCTTATATCAATTCGTTAGAGATCTA 780  
Qy 781 ACGTTAGGGGATTAATGATCTAGTGGCACTATTCGCAAGCTATGACATCGCACTTATCA 840  
Dh 781 ACGTTAGGGGATTAATGATCTAGTGGCACTATTCGCAAGCTATGACATCGCACTTATCA 840  
Qy 841 ATAAATACGAGTGTCTGATTAACAGGGAAGTTTATACAGCGCAATTTGAGCAACAGG 900  
Dh 841 ATAAATACGAGTGTCTGATTAACAGGGAAGTTTATACAGCGCAATTTGAGCAACAGG 900  
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Dh 841 ATGAATACGAGTGTCTCAATTAACAGGGAATTTATACAGATCCAAATTTGAGGAACAAAT 900  
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Qy 955 ATAGAGACTGCGGTTATCCAGAGCCGCACTTATGATTTTCTAGAACATTTACAAAT 1014  
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Dh 1015 TTTAGCACTTCATCAATGAGATGCTATAGGCAATAGCAATTAATCTGCGCGGCGCACCA 1074  
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Dh 1021 TTGAGCTATTAATGATGATGAGATTAATCAATATATGATTAATCTGCGGCGGCGCACAGA 1080  
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Dh 1912 ATTACTGCAACCTTGAGAGCAATGCAATTTAGAAAGGGCGGAGGGGGGATGCT 1971  
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 Db 3412 CGTAATCTGATATAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3471  
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 Db 3652 GACAGCTGGAATTAATCTCTTATGAGAGATAG 3684

RESULT 5  
 US-08-377-690-1  
 ; Sequence 1, Application US/08377690  
 ; Patent No. 5628995  
 ; GENERAL INFORMATION:  
 ; APPLICANT: PEPPERON, Marjix  
 ; APPLICANT: JANSSENS, Stefan  
 ; APPLICANT: DENOLF, Peter  
 ; TITLE OF INVENTION: CONTROL OF OSTRINIA  
 ; NUMBER OF SEQUENCES: 3  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: Burns, Doane, Swecker & Mathis  
 ; STREET: The George Mason Bldg., Washington & Prince  
 ; STREET: Sts.  
 ; CITY: Alexandria  
 ; STATE: Virginia  
 ; COUNTRY: United States  
 ; ZIP: 2213-1404  
 ; COMPUTER READABLE FORM:  
 ; MEDIUM TYPE: Floppy disk  
 ; COMPUTER: IBM PC compatible  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: PatentIn Release #1.0, Version #1.25  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/08/377,690  
 ; FILING DATE:  
 ; CLASSIFICATION: 800  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: US/08/164,781  
 ; FILING DATE:  
 ; APPLICATION NUMBER: US 07/938,362  
 ; FILING DATE: 31-AUG-1992  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Crane-Feury, Sharon B  
 ; REGISTRATION NUMBER: 36,113  
 ; REFERENCE/DOCKET NUMBER: 010830-039  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: (703) 836-6620  
 ; TELEFAX: (703) 836-2021  
 ; INFORMATION FOR SEQ ID NO: 1:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 4074 base pairs  
 ; TYPE: nucleic acid  
 ; STRANDEDNESS: double  
 ; TOPOLOGY: linear



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1 MOLECULE TYPE: DNA (genomic)
2
3 ORIGINAL SOURCE:
4 ORGANISM: Bacillus thuringiensis
5 STRAIN: entomocidus HD 110
6 FEATURE:
7 NAME/KEY: CDS
8 LOCATION: 186..3872
9 OTHER INFORMATION: /note= "PROPERTIES: CryIb is toxic to
10 OTHER INFORMATION: Obtrinea nudilalis (among others)"
11 US-08-377-690-1
12
13 Query Match 85.0%; Score 3133.6; DB 1; Length 4074;
14 Best Local Similarity 91.1%; Pred. No. 0;
15 Matches 3373; Conservative 0; Mismatches 299; Indels 30; Gaps 3.
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17 QY 1 TTGACTTCAAATAGGAAAAATGAGATGAATATATAAATGCTTTATATGATTCAGACTGA 60
18 DB 186 TTGACTTCAAATAGGAAAAATGAGATGAATATATAAATGCTTTATATGATTCAGACTGA 230
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21 DB 231 TCGAATCATTCACGCAAAATGAGATCATATTAACAGATGCTCGTATTAGAGATTCTTTGTGT 290
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23 QY 121 ATAGCCGAGGGGAATTAATATCAATCCATTGTAAGCGATCAACAGTCCAAACGGGTATT 180
24 DB 291 ATAGCCGAGGGGAATTAATATGATTCATATTTGTTAGCGATCAACAGTCCAAACGGGTATT 350
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26 QY 181 AACATAGCTGTAGATATCTAGTGTATATTAGGCGTACCGCTTTGCTGACAAATAGCTAGT 240
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29 QY 241 TTTTATAGTTTTCTTTGTTGTGTAATTATAGCCCGCGCGAGAGATCACTGGGAAATTTTC 300
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32 QY 301 CTAGAAAGTGTGGAACAACCTTAATTAATCAACAAATAGAGAAATGCTAGGAATAGCGCA 360
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36 DB 531 CTGTGCTGATTAACAAGTTTAGAGATTCTTTAGAGCTTATCAACAGTCACTTGAMAT 590
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38 QY 421 TGGCTAGAAAAACGTGATGATGCAAGAAAGAGAAAGTGTCTTATATCCCAATATATAGCC 480
39 DB 591 TGGCTAGAAAAACGTGATGATGCAAGAAAGAGAAAGTGTCTTATATCCCAATATATAGCT 650
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42 DB 651 TTAGAACTTGATTTTCTTAATGCCATGCCGCTTTTCGCAATTAGAAACCAAGAACTTCCA 710
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44 QY 541 TTATTAATGATATATGCTCAAGCTGCAAAATTCAACTATTTATTTAGAGATGCTCT 600
45 DB 711 TTATTAATGATATATGCTCAAGCTGCAAAATTCAACTATTTATTTAGAGATGCTCT 770
46
47 QY 601 CTTTTTGTAGTGAATTTGGGCTTATCATTCGACAGAAATTCACGTTATATAGGCCCA 660
48 DB 771 CTTTTTGTAGTGAATTTGGGCTTATCATTCGACAGAAATTCACGTTATATAGGCCCA 830
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50 QY 661 GTGGAACAAACGAGATTATTCGACATATTCGTAAGATGATATATACAGTCTTAAT 720
51 DB 831 GTGGAACAAACGAGATTATTCGACATATTCGTAAGATGATATATACAGTCTTAAT 890
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53 QY 721 AGCTTGAGAGGGGCAAAATGCGCAAGTTGGGGTGCCTTAATCAATTCGTAAGATGCA 780
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56 QY 781 ACGTTAGGGGTATTAGATCTAGTGGCACTATTCCAAAGCTATGACACTCGCACTTATCCA 840
57 DB 951 ACGTTAGGGGTATTAGATCTAGTGGCACTATTCCAAAGCTATGACACTCGCACTTATCCA 1010
58
59 QY 841 ATAAATACGAGTGTCTACGTTAAACAAGGAATTTATATACAGACGCAATTGAGCAACGGG 900
60

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Dd	1131	GCTGCGGCTATCCGAAACCCGCACTTACTTGATTTCTTACAAACCTTACAAATTTTATGC	1190
Qy	1021	ACTTCATCAGATGAGTGTCTACTAGGCAATGACTTACTGCGCGGGGCAACAAATTCAA	1080
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Dd	1371	GTCGTTCTATGGGGAAATTTACCTTGAACCAATTCATGGTGTCCCTACTGTTAATTTAT	1430
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Dd	1971	AGAGTGTCTTTACTACACCTTTTACTTTTATCACAAAATTCAGATATATATTCGAGCTCT	2030
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QY 1978 TTTACTAATACGAATCCAGAAAGTTGAAAACAGATGTGACAGATTATCATATTGATCAA 2037  
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DB 3051 GCTTTATTTGATGATTTCAATATATATATATATATATATATATATATATATATATAT 3110  
QY 2938 CATGCGGAGATTAACCTGTTCAATCGAATTCAGAGGCTTATCTGCAATATCTGTT 2997  
DB 3111 CATGCGGAGATTAACCTGTTCAATCGAATTCAGAGGCTTATCTGCAATATCTGTT 3170  
QY 2998 ATCCGGGAGTAAATGCGAAATTTTGAAGATTTAAGAGTGCATTAATCACTGCAATC 3057  
DB 3171 ATCCGGGAGTAAATGCGAAATTTTGAAGATTTAAGAGTGCATTAATCACTGCAATC 3230

QY 3058 TCCTATACGATGCGAGAAATGTCTGTTAAAAATGCTGATTTTAATATGATTAAGCATGC 3117  
DB 3231 TCCTATACGATGCGAGAAATGTCTGTTAAAAATGCTGATTTTAATATGATTAAGCATGT 3290  
QY 3118 TGAATGTAAAGGGGCAATGATGATGATCAACAGAGCCATCAAGCTGCTGCTGTTATC 3177  
DB 3291 TGAATGTAAAGGGGCAATGATGATGATGATCAACAGAGCCATCAATGCTGCTGCTGTTATC 3350  
QY 3178 CCAAGATGGAAGAGAGAGTGTCAACAGAGCTTCCGCTCTGTCGGGGGCGTGTATATC 3237  
DB 3351 CCAAGATGGAAGAGAGAGTGTCAACAGAGCTTCCGCTCTGTCGGGGGCGTGTATATC 3410  
QY 3238 CTCCTGTCAACGGCTCAAAAGAGGATATGAGAGGCTTGTGATCAATCATGAATC 3297  
DB 3411 CTCCTGTCAACGGCTCAAAAGAGGATATGAGAGGCTTGTGATCAATCATGAATC 3470  
QY 3298 GAGAACATACAGACGAACTTAAATTTAAACCTGTGAAGAGAGAGTATCCAAG 3357  
DB 3471 GAGAACATACAGACGAACTTAAATTTAAACCTGTGAAGAGAGAGTATCCAAG 3530  
QY 3358 GATACAGAAAGCTGTATGATTTATCTGCAACCAAGTACAGC-----AGTA 3405  
DB 3531 GATACAGAAAGCTGTATGATTTATCTGCAACCAAGTACAGCTGATGCGCAAGATGCA 3590  
QY 3406 TGTATTTCCGTTAATGCTGATATGAGATGATGATGATGATGATGATGATGATGATGAT 3465  
DB 3591 TGTATTTCCGTTAATGCTGATATGAGATGATGATGATGATGATGATGATGATGATGATGAT 3650  
QY 3466 AATTACAAACCGCTTATGAAAGAAAGGATGATGATGATGATGATGATGATGATGATGATGAT 3525  
DB 3651 AATTACAAACCGCTTATGAAAGAAAGGATGATGATGATGATGATGATGATGATGATGATGAT 3710  
QY 3526 GAATATGACAGAGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3585  
DB 3711 GAATATGACAGAGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3770  
QY 3586 TTGAATACTTCCCAAGAACCGATGATGATGATGATGATGATGATGATGATGATGATGAT 3645  
DB 3771 TTGAATACTTCCCAAGAACCGATGATGATGATGATGATGATGATGATGATGATGATGAT 3830  
QY 3646 TTTATTTGATGACCGCTGGAATTTACTCTTATGAGAGAAATG 3687  
DB 3831 TTTATTTGATGATGACCGCTGGAATTTACTCTTATGAGAGAAATG 3872

RESULT 6  
US-08-100-709-3  
; Sequence 3, Application US/08100709  
; Patent No. 5322687  
; GENERAL INFORMATION:  
; APPLICANT: Donovan, William P.  
; APPLICANT: Tan, Yiping  
; APPLICANT: Jany, Christine S.  
; TITLE OF INVENTION: BACILLUS THURINGIENSIS CRYE14 AND CRYE15  
; TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS  
; NUMBER OF SEQUENCES: 5  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Panlitch Schwarze Jacobs & Nadel c/o A.S.  
; ADDRESSEE: Nadel  
; STREET: 1601 Market Street, 36th Floor  
; CITY: Philadelphia  
; STATE: Pennsylvania  
; COUNTRY: U.S.A.  
; ZIP: 19103  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/100,709  
; FILING DATE: 19930729

CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: Egolf, Christopher  
REGISTRATION NUMBER: 27633  
REFERENCE/DOCKET NUMBER: 7205-49  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 215-757-1590  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 3934 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: double  
TOPOLOGY: circular  
MOLECULE TYPE: DNA (genomic)  
FEATURE:  
NAME/KEY: CDS  
LOCATION: 67..3756  
FEATURE: misc\_feature  
NAME/KEY: LOCATION:  
LOCATION: 2253..2272  
US-08-100-709-3

Query Match 72.9%; Score 2687.2; DB 1; Length 3934;

Best Local Similarity 83.5%; Pred. No. 0; Mismatches 593; Indels 15; Gaps 3;

Matches 3088; Conservative 0; Mismatches 593; Indels 15; Gaps 3;  
QY 1 TTGACTTCAATAGAAAAATGAAATGAATGAATTAATAATCTTTATCGATTCCAGCTGTA 60  
DB TTGACTTCAATAGAAAAATGAAATGAATGAATTAATAATCTTTATCGATTCCAGCTGTA 126  
QY 61 TCGAATCATTCACCAAAATGATCTATCACGATGCTGTAATGAGATTCTTTGTCT 120  
DB TCGAATCATTCACCAAAATGATCTATCACGATGCTGTAATGAGATTCTTTGTCT 186  
QY 121 ATAGCGAGGGGAAATATCAATCCACTTTAGGCGATCAACAGCCAAAGGGGATT 180  
DB ATAGCGAGGGGAAATATCAATCCACTTTAGGCGATCAACAGCCAAAGGGGATT 246  
QY 187 GTAGCGAGGGGAAATATCAATCCACTTTAGGCGATCAACAGCCAAAGGGGATT 246  
DB 181 AACATGCTGTAGAAATCTAGTGTATAGCGCTACCGTTTGTGCAAAATAGCTAGT 240  
QY 247 AACATGCTGTAGAAATCTAGTGTATAGCGCTACCGTTTGTGCAAAATAGCTAGT 306  
DB 241 TTTTATAGTTTTCTTGTGTGTAATTAAGGCGCGCGGAGATCAGTGGGAAATTTTC 300  
QY 307 TTTTATAGTTTTCTTGTGTGTAATTAAGGCGCGCGGAGATCAGTGGGAAATTTTC 366  
DB 301 CTGAACATGTCGAACAACTTATTAATCAACAAATACAGAAATGCTAGAAATAGCGCA 360  
QY 367 CTGAACATGTCGAACAACTTATTAATCAACAAATACAGAAATGCTAGAAATAGCGCT 426  
DB 361 CTGCTCGATTACAGGTTTGAAGATCTTTAGAGCTTATCAACAGTCACTTGAAGAT 420  
QY 427 ATTGCTCGATTACAGGTTTGAAGATCTTTAGAGCTTATCAACAGTCACTTGAAGAT 486  
DB 421 TGGCTAGAAAACGCTGATGATGCAAGACGAAAGTCTTTATACCAATATATAGCC 480  
QY 487 TGGTATGATTAACCGAAATGATGCAAGATGCAAGACGATTAATCTTGAAGCCCTATGTTGCT 546  
DB 481 TTGAACCTTGAATTTCTTAAATGCAATGCGCTTTTGCATTTAGAAACAAAGATTTCA 540  
QY 547 TTGAACCTTGAATTTCTTAAATGCAATGCGCTTTTGCATTTAGAAACAAAGATTTCA 606  
DB 541 TTATTAATGATATGCTCAAGCTGCAAAATTTACACCTATATTAATGAGATGCTCTCT 600  
QY 607 TTATTAATGATATGCTCAAGCTGCAAAATTTACACCTATATTAATGAGATGCTCTCT 666  
DB 601 CTTTGTGATGATTTGGGCTTAATCCGAGAAATTCAGCTTAATTAAGCCGCA 660  
QY 667 CTTTGTGATGATTTGGGCTTAATCCGAGAAATTCAGCTTAATTAAGCCGCA 726  
DB 661 GTGGAACAAACGAGATTTATCCGACTATGCTAGAAATGATTAATAGAGGCTTAAT 720  
QY 727 ATCAGATATACAGGAATTTCTAACCATTTGCGTACATGATTAATACAGGGCTTAAT 786

QY 721 AGCTGAGAGGCAAAATGCGCAAGTTGGTGCTTATATATCAATTCCTGTAGAGATCTTA 780  
DB AACTTAAGAGGCAAAATGCGCAAGTTGGTGCTTATATATCAATTCCTGTAGAGATCTTA 846  
QY 781 AGCTTGGGGATTTATGATCTAGTGACATTAATCCCAAGGATGACCTGCACTTTATCCA 840  
DB 847 AGCTTGGGGATTTATGATTTAGTATGCTTATTCAGAGCTATGATCTGCACTTTATCCA 906  
QY 841 ATTAATACAGATGCTCAATGAATGAAGAAATTTATACAGACGCAATTTGAGCAACAGG 900  
DB 907 ATCAATACAGATGCTCAATGAATGAAGAAATTTATACAGATCAATTTGAGCAACAAAT 966  
QY 901 GTPAAT-----ATGCAAGTATGAATTTGATTAATTAATGACCTTCTGTTCCGCT 954  
DB GCACCTTCAGGATTTGCAAGTATGCAATTTGATTAATTAATGCAATCTGTTCTGCTC 1026  
QY 955 ATGAGACGCTGGGTTATCCGAGCCGCAATCTGATTTTCTAGAACAACTTACAAAT 1014  
DB 1027 ATGAGGCTGCTCAATTTTCAGGCTCCGCAATCTGATTTTTCAGAACAACTTACAAAT 1086  
QY 1015 TTAGCACTTCATCAAGATGAGTGTCTACTAGGCAATATGACTTATGCGGGGGGCAACA 1074  
DB 1087 TACAGTGCATCAAGCGCTTGGAGTACACTCAACATATGAATTAATGGGAGGCAATAGG 1146  
QY 1075 ATTCAATCTCGGCAATAGAGGCGGATTAATATCTCAACGATGGGTCTACCA--AT 1131  
DB 1147 CTTAACCTTCGCGCAATAGAGGCAATTAATATCTCAACACAGACTTACTTAATTAAT 1206  
QY 1132 ACTTCAATTAATCTGTAATGATATCAATCTCTCGAGAGCGTATATTTGATGATCA 1191  
DB 1207 ACTTCAATTAATCTGTAATGATATCAATCTCTCGAGAGCGTATATTTGATGATGATCA 1266  
QY 1192 TATGCAAGATGCTTCTATGAGGAAATTTACTTGAACCTATTCAGTGTCTCTACTGTT 1251  
DB 1267 AATGCAAGGACAAATAT-----ACTATTTACTACTCTGTGAATGGAATCTTGGGCT 1320  
QY 1252 AGATTTAATTTTGAACCTCAGAAATCTTTGAAAGAGTACTGCTAATATGTCAA 1311  
DB 1321 AGATTTAATTTTGAACCTCAGAAATCTTTGAAAGAGGCGCCACTTACTTCAAGTCAA 1380  
QY 1312 CCTATGATGACCTGCGGCTTCAATTAATAAGTTGAAAGTCAAGAACTGACACAGAAACA 1371  
DB 1381 CGGTATCAGAGATTTGGGATTTCAATTAATTTGATTTGAAATCTGAATTAACACAGAAACA 1440  
QY 1372 ACAGAACGACCAATATGATATCATATAGTCAATAGGTTATCTCAGATAGGCTCAATTTCA 1431  
DB 1441 ACAGAACGACCAATATGATATCATATAGTCAATATATCTCATATAGGACTATATCATTA 1500  
QY 1432 CAATGAGGTGATGATCAAGTATATCTTGAAGCGACCGTATGTCAGATCTGTAACAAT 1491  
DB 1501 GGAACACCTTGAAGACACAGCTTATCTTGAAGCGACCGTATGTCAGATCTGTAACAAT 1560  
QY 1492 ACCATAGTTCAGATGATGATTAACAAATACCATTTGTAATCATTTCAACTTTATTTCA 1551  
DB 1561 ACCATAGTTCAGATGATGATTAACAAATACCATTTGTAATCATTTCAACTTTATTTCA 1620  
QY 1552 GGTACCTCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1611  
DB 1621 GGTGTTACTGTTGTTGAGAGGCGCAGATTTTACAGTGGGGATATCTCTGTAGAACAAAT 1680  
QY 1612 AATGTAATGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1671  
DB 1681 ACCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1740  
QY 1672 GTGAGATGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1731  
DB 1741 GTAGAGATGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1800  
QY 1732 ACTACTTTGATCAAGATTTCTCTAGTATGATGATGATGATGATGATGATGATGATGAT 1791  
DB 1801 ACTGTTAATTTGATGATTTTCTCAAGAACTATGATGATGATGATGATGATGATGATGAT 1860

QY 1792 TCATTAGATTGCGAATTTCCGTAGATTTAGTCATCTGCACTCAACTGCTGGA 1851  
DB 1861 AGTTTAGAAGCTGAGGATTTAGTACTCTTTTAATTTTAAATGCCAAGCAATTC 1920  
QY 1852 ATAGATTAAGTAAATATGAGGATGACAAACGTTTCACTTGTATTAATTTGAATTCAT 1911  
DB 1921 ACATTGGGTCTGAGCTTTTCAATCAGAACTTTATATAGTAGAGTCGAATTTGTT 1980  
QY 1912 CCAATTAAGTCAACTTTCGAGAGCAATACGATTTAGAAAAGGCGCAAGGCGGTGAT 1971  
DB 1981 CCAGAGAGGTATCATTTGAGGCGAATATGATTTAGAAAGAGCAAAAAGGCGGTGAT 2040  
QY 1972 GCTCTGTTTACTTAATGAGATCCAGAAAGTTGAAAAGATGTGACAGATTTATCATTT 2031  
DB 2041 GCTCTGTTTACTTAATGAGATCCAGAAAGTTGAAAAGATGTGACAGATTTATCATTT 2100  
QY 2032 GATCAAGTATCAATTTAGTGGCGGTGTTTATTCGATGATTTCTGCTTATGTAAGAGA 2091  
DB 2101 GACCAAGTCTCAATATGTGGCATGTTTATCAGATGAATTTTCTGATGAGAACGA 2160  
QY 2092 GAATTAATTGAGAAAGTAAATATGCGAAAGCACTCAGTATGAAAGAACTTACTCMA 2151  
DB 2161 GAATTAATTGAGAAAGTAAATATGCGAAAGCACTCAGTATGAAAGAACTTACTCMA 2220  
QY 2152 GATCCAACTTCAATCCATCAATAGCAACGACTTCAATCTACTAATGAGCAATCG 2211  
DB 2221 GATCCAACTTCAATCCATCAATGAGGCAATTAAGTTCCATCCATCGATGCAATCA 2280  
QY 2212 AATTTCATCTATCCATGAACTGAATCATGATGTGGGGAAGTGAACATTTACA 2271  
DB 2281 AACTTCCCTCTATTAATGAGCTATGAACTGAGTGGGGAAGTGGAAATGTTACC 2340  
QY 2272 ATCCAGAAAGAAATGACGTATTTAAAGAAATTAAGTCACTACCGGGAGCTTTAAT 2331  
DB 2341 ATCCAGAAAGGAAATGACGTATTTAAAGAAATTAAGTCACTACCGGGAGCTTTAAT 2400  
QY 2332 GAGTGTATTCGACGTATTTAATCAAAAATGAGAGTGGGAATTAAGCTTATACT 2391  
DB 2401 GAGTGTATTCGACGTATTTAATCAAAAATGAGAGTGGGAATTAAGCTTATACT 2460  
QY 2392 CGCTACCAATTAAGGGTATTTGAAGATGATCAAGATTTAGAGATATTTGATTCGT 2451  
DB 2461 CGCTACCAATTAAGGGTATTTGAAGATGATCAAGATTTAGAGATTTAATTTGATTCGT 2520  
QY 2452 TATTAATGCGAAACATGAACTTGGATGTTCCAGTACCGAGTCCGATGGCGCTTTCA 2511  
DB 2521 TACAATGCGAAAGATGAACATTTGGATGTTCCAGTACCGAGTCCGATGGCGCTTTCA 2580  
QY 2512 GTTGAAGGCCAATCGGAAGGTGCGGAAGCAAGATCGATGCGACCACTTTTGAATGG 2571  
DB 2581 GTTGAAGGCCAATCGGAAGGTGCGGAAGCAAGATCGATGCGACCACTTTTGAATGG 2640  
QY 2572 AATCCGATCTAGATTGTTCCCTGACAGATGGAAGAAAATGTCGATCTTCCCATCAT 2631  
DB 2641 AATCCGATCTAGATTGTTCCCTGACAGATGGAAGAAAATGTCGATCTTCCCATCAT 2700  
QY 2632 TTCTCTTGGATTTGATATTGGATGACAGACTTGCATGAGATCTAGGCGTGGGTTG 2691  
DB 2701 TTCACTTTGGATTTGATATTGGATGACAGACTTGCATGAGATCTAGGCGTGGGTTG 2760  
QY 2692 GATTTCAAGATTAAGACGAGAAAGTCTATGCAAGCTAGGGAATCTGGAATTTATGAA 2751  
DB 2761 GATTTCAAGATTAAGACGAGAAAGTCTATGCAAGCTAGGGAATCTGGAATTTATGAA 2820  
QY 2752 GAGAAACCATTTATGAGAAAGCACTGCTCGGTGTAAGAGACAGAAAGAAATGAGAA 2811  
DB 2821 GAGAAACCATTTATGAGAAAGCACTGCTCGGTGTAAGAGACAGAAAGAAATGAGAA 2880  
QY 2812 GACAAACGTGAAACCTACATTTGAAACAAACAGATATATCAGAGCGAAAGAAAGCT 2871  
DB 2881 GACAAACGTGAAACCTACATTTGAAACAAACAGATATATCAGAGCGAAAGAAAGCT 2940  
QY 2872 GTGGATGCTTTATTTGATGATTTCTCAATATATATGATTAACAGCGGATACAAACATTGGC 2931

DB 2941 GTGGATGCTTTATTTGATGATTTCTCAATATGATTAACAGCGGATACAAACATTGGC 3000  
QY 2932 ATGATTCATGCGCAGATTAACCTTGTTCATGCAATTCGAGAGGCTTATCTGTGAAATTA 2991  
DB 3001 ATGATTCATGCGCAGATTAACCTTGTTCATGCAATTCGAGAGGCTTATCTGTGAAATTA 3060  
QY 2992 TCTGTATCCCGGGTGTAAATGCGGAAATTTTGAAGAATTAAGAGGTGCGATTTCACT 3051  
DB 3061 CTTGTATCCAGATGTAAATGCGGAAATTTTGAAGAATTAAGAGGTGCGATTTCACT 3120  
QY 3052 GCATCTCCCTATATCCATGCGAGAAATGTGTTAAAAATGTGATTTAATATGAAATTA 3111  
DB 3121 GCATCTCCCTATATCCATGCGAGAAATGTGTTAAAAATGTGATTTAATATGAAATTA 3180  
QY 3112 GCATCTCCCTATATCCATGCGAGAAATGTGTTAAAAATGTGATTTAATATGAAATTA 3171  
DB 3181 ACATGTTGGAATGTAAAGGCAATGTGATGATGATGATGATGATGATGATGATGATGAT 3240  
QY 3172 GTTATCCAGAAATGCGAGAAAGTGTCAAAAGCACTTGTGCGTGTGCGGGCGTGGC 3231  
DB 3241 GTTATCCAGAAATGCGAGAAAGTGTCAAAAGCACTTGTGCGTGTGCGGGCGTGGC 3300  
QY 3232 TATATCTCCGTGTCAAGGCTACAAAGAGGATATGGAAGGTTGTGTAAGATCAT 3291  
DB 3301 TATATCTCCGTGTCAAGGCTACAAAGAGGATATGGAAGGTTGTGTAAGATCAT 3360  
QY 3292 GAATGAGAAACAATCAGAGCACTTAAATTTAAAACTGTGAAAGAAAGTGTAT 3351  
DB 3361 GAATGAGAAACAATCAGAGCACTTAAATTTAAAACTGTGAAAGAAAGTGTAT 3420  
QY 3352 CCAACGATTAACAGAAAGTGTAAATGATTAATGATGATGATGATGATGATGATGAT 3411  
DB 3421 CCAACGATTAACAGAAAGTGTAAATGATTAATGATGATGATGATGATGATGATGAT 3480  
QY 3412 TCCCGTAATGCTGATATGAGATGCAATATGAAGTGTATCTACAGATCTGTTAATAC 3471  
DB 3481 TCCCGTAATGCTGATATGAGATGCAATATGAAGTGTATCTACAGATCTGTTAATAC 3540  
QY 3472 AAACGATTAACAGAAAGTGTAAATGATTAATGATGATGATGATGATGATGATGAT 3531  
DB 3541 AAACGATTAACAGAAAGTGTAAATGATTAATGATGATGATGATGATGATGATGAT 3600  
QY 3532 GACAGAGGATGATGATTAATCCACCACTACAGTGTATTAATGACAAAGAAATTAAGAA 3591  
DB 3601 GACAGAGGATGATGATTAATCCACCACTACAGTGTATTAATGACAAAGAAATTAAGAA 3660  
QY 3592 TACTTCCGAAACCGATTAAGTATGATGATGATGATGATGATGATGATGATGAT 3651  
DB 3661 TACTTCCGAAACCGATTAAGTATGATGATGATGATGATGATGATGATGATGAT 3720  
QY 3652 GTAGACAGGTGGAATTAATCTCTTATGAGGAATAG 3687  
DB 3721 GTAGATAGGTGGAATTAATCTCTTATGAGGAATAG 3756

RESULT 7  
US-08-176-865-3  
Sequence 3, Application US/0817865  
Patent No. 5616319  
GENERAL INFORMATION:  
APPLICANT: Donovan, William P.  
APPLICANT: Tan, Yiping  
APPLICANT: Jany, Christine S.  
APPLICANT: Gonzalez Jr., Jose M.  
TITLE OF INVENTION: BACILLUS THURINGIENSIS CYET4 AND CYET5  
TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS  
NUMBER OF SEQUENCES: 5  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Panitch Schwarze Jacobs & Nadel c/o A.S.  
ADDRESSEE: Nadel  
STREET: 1601 Market Street, 36th Floor  
CITY: Philadelphia

STATE: Pennsylvania  
COUNTRY: U.S.A.  
ZIP: 19103  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/176,865  
FILING DATE: 30-DEC-1993  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/100,709  
FILING DATE: 29-JUL-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Egolf, Christopher  
REGISTRATION NUMBER: 27633  
REFERENCE/DOCKET NUMBER: 7205-49  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 215-757-1590  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 3934 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: double  
TOPOLOGY: circular  
MOLECULE TYPE: DNA (genomic)  
FEATURE:  
NAME/KEY: CDS  
LOCATION: 67..3756  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 2253..2272  
US-08-176-865-3

Query Match 72.9%; Score 2687.2; DB 1; Length 3934;  
Best Local Similarity 83.5%; Pred. No. 0;  
Matches 3088; Conservative 0; Mismatches 593; Indels 15; Gaps 3;

QY 1 TTGACTTCGAATAGGAAATGGAATGAATTAATTAATGCTTATGATCCAGCTGTA 60  
DB 67 TTACCTTCGAATAGGAAATGGAATGAATTAATTAATGCTTATGATCCAGCTGTA 126  
QY 61 TCGAATCATTCACACAAATGATCTATCAACAGATGCTGATTTGAGATTCCTTGTGT 120  
DB 127 TCGAATCATTCACACAAATGATCTATCAACAGATGCTGATTTGAGATTCCTTGTGT 186  
QY 121 ATAGCCGAGGGAATTAATCAATCCACTTTAGCCGATCAACAGTCCAAAGGGTATT 180  
DB 187 GTAGCCGAGGGAATTAATCAATCCACTTTAGCCGATCAACAGTCCAAAGGGTATT 246  
QY 181 AACATGCTGTGAATTAATCAATCCACTTTAGCCGATCAACAGTCCAAAGGGTATT 240  
DB 247 AACATGCTGTGAATTAATCAATCCACTTTAGCCGATCAACAGTCCAAAGGGTATT 306  
QY 241 TTTTATGTTTCTTGTGATTAATGAGCCCGCGGAGAGATCAGTGGAAATTTTC 300  
DB 307 TTTTATGTTTCTTGTGATTAATGAGCCCGCGGAGAGATCAGTGGAAATTTTC 366  
QY 301 CTAGAACATGTCGAACACTTATTAATCAACAAATTAACAGAAATGCTAGGAATACGCA 360  
DB 367 CTAGAACATGTCGAACACTTATTAATCAACAAATTAACAGAAATGCTAGGAATACGCA 426  
QY 361 CTGCTGATTAAGAGTTTGAAGATTCCTTTAGAGCTTCAACAGTCACTTGAAGAT 420  
DB 427 ATGCTGATTAAGAGTTTGAAGATTCCTTTAGAGCTTCAACAGTCACTTGAAGAT 486  
QY 421 TGCGTGAAGAACCGTGAATGACAAAGAGAGAGTCTTTATACCAATATATAGCC 480  
DB 487 TGCGTGAAGAACCGTGAATGACAAAGAGAGAGTCTTTATACCAATATATAGCC 546  
QY 481 TTGAACCTGATTTCTTAATGCGATGCCGCTTTGCGCAATAGAAACAAAGATTTCCA 540

DB 547 TTGAACCTGATTTCTTAATGCGATGCCGCTTTGCGCAATAGAAATGAAGATTTCCA 606  
QY 541 TTATTAATGATTAATGCTCAAGCTGCAAAATTTACACTTATTAATTTGAGAGATGCTCT 600  
DB 607 TTATTAATGATTAATGCTCAAGCTGCAAAATTTACACTTATTAATTTGAGAGATGCTCT 666  
QY 601 CTTTGTGATGAAATTTGGGCTTACATGCGAGAAATTTCAACGTTATTTATGAGCCCA 660  
DB 667 CTTTGTGATGAAATTTGGGCTTACATGCGAGAAATTTCAACGTTATTTATGAGCCCA 726  
QY 661 GTGGAACAAACGAGATTAATCCGATTAATGCGTGAATGATTAATCAGGCTTAAT 720  
DB 727 ATCAGTATTAACAGAGAAATTTTACATGCGTGAATGATTAATCAGGCTTAAT 786  
QY 721 AGCTTGAAGAGGCAAAATCCGCAAGTTGGGCTTATTAATCAATTCGCTAGAGATTA 780  
DB 787 AACTTAAGAGGCAAAATGCTGAAGTTGGTGGGCTATTAATCAATTCGCTAGAGATTA 846  
QY 781 AGCTTGAAGAGGCTTATTAATGCTGAAGTTGGGCTTATTAATCAATTCGCTAGAGATTA 840  
DB 847 AGCTTGAAGAGGCTTATTAATGCTGAAGTTGGGCTTATTAATCAATTCGCTAGAGATTA 906  
QY 841 ATTAATGAGAGGCTTATTAATGCTGAAGTTGGGCTTATTAATCAATTCGCTAGAGATTA 900  
DB 907 ATTAATGAGAGGCTTATTAATGCTGAAGTTGGGCTTATTAATCAATTCGCTAGAGATTA 966  
QY 901 GTAAAT-----ATGCAAGTATGAAATTTGTTAATTAATGCACTTGGTTTCGCT 954  
DB 967 GCACCTTCAAGATTTGCAAGTATGCAAGTATTTAATTAATGCACTTGGTTTCGCT 1026  
QY 955 ATAGAGACTGCGGTTATTCGAAACCGGCACTTATGATTTTCTAGAAACAACTTAAT 1014  
DB 1027 ATAGAGACTGCGGTTATTCGAAACCGGCACTTATGATTTTCTAGAAACAACTTAAT 1086  
QY 1015 TTAGACTTCATCAAGATGAGTGTCTAATGAGATGATGCTTACGCGGCGGCAACA 1074  
DB 1087 TACAGTGCATCAAGCTTGGAGTACCTCAACATTAATTAATTTGGTGGGCACTAGG 1146  
QY 1075 ATTCATCTCGGCAATGAGAGCGGATTAATTAATCTCAACGATGGCTTACCA--AT 1131  
DB 1147 CTTAATCTCGGCAATGAGAGCGGATTAATTAATCTCAACGATGGCTTACCAAT 1206  
QY 1132 ACTTATTAATCTGTAAGTATTAATTAATCTTCTCGAGAGCTATTAATGAGTCAATCA 1191  
DB 1207 ACTTATTAATCTGTAAGTATTAATTAATCTTCTCGAGAGCTTATTAATGAGTCAATCA 1266  
QY 1192 TATGAGAGGCTTCTATGAGGGAATTTAATCTTGAACCTATTCATGAGTCCCTAGCT 1251  
DB 1267 TATGAGAGGCTTCTATGAGGGAATTTAATCTTGAACCTATTCATGAGTCCCTAGCT 1320  
QY 1252 AGATTAATTTTGAAGACCTCAGAAATCTTTTGAAGAGTACGCTTAATTAATGCA 1311  
DB 1321 AGATTAATTTTGAAGACCTCAGAAATCTTTTGAAGAGGCGCACTTAATTAATGCA 1380  
QY 1312 CCTATGAGTCACTGGGCTTCAATTAATTAATGAGTCAATTAATTAATGAGTCAATCA 1371  
DB 1381 CCTATGAGTCACTGGGCTTCAATTAATTAATGAGTCAATTAATTAATGAGTCAATCA 1440  
QY 1372 ACAGAGAGCAAAATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTA 1431  
DB 1441 ACAGAGAGCAAAATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTA 1500  
QY 1432 CAATGAGGCTGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTA 1491  
DB 1501 GGAAGACCTTTGAGACCAAGTCTATTTGAGACCAAGTCTATTTGAGACCAAGTCTAT 1560  
QY 1492 ACCATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTA 1551  
DB 1561 ACCATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTA 1620  
QY 1552 GATACCTGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTA 1611

D 1621 GGTGTACTGTGTGGAGGCCAGANTTACAGGTGGGATATCCTTCTGTAACAAT 1680  
Q 1612 AATGTAGTGTACTAGATAGGTCTTAATTTAATAATACATTAACGGGTATGC 1671  
D 1681 ACCGGTCAATTTGGAGATATACGATTAATTAATGACATTAATCCCAAGATATGC 1740  
Q 1672 GTGAGATTTGTTTGTGCTTCTTCAACATAGTCCGAGGGTATCTGTGGAGGAGT 1731  
D 1741 GTAAAGATGCTTAATGCTTACTTACATTAACATTTTTCACAGAAATTAATGAACC 1800  
Q 1732 ACTACTTTGATCAAGATTCCTAGTACTATGATGCAATGAGTCTTTGACATCTCA 1791  
D 1801 ACTGTTAATATGTTATTTCTCAAGAACTATGAATAGGGGGATTAATTTGAATATGA 1860  
Q 1792 TCATTTAGATTTGAGAAATTTCTGTAGTATTAAGTCAATGCGACGCAACTGCTGA 1851  
D 1861 AGTTTGAAGTCAAGATTTAGTACTCTTTAATTTTAAATGCCCAAGACATTC 1920  
Q 1852 ATAGATTAAGTATTAATGCAAGTACAAACGTTTCACTTGAATTAATGAATTCAT 1911  
D 1921 ACATGGGTGCTCAGATTTTCAATCAGAGATTTATATAGATAGATCGAATTTGTT 1980  
Q 1912 CCAATTAAGTCAACCTTCAAGAGAAATAGATTTAGAAAGGGGCAAGGGCGGTAA 1971  
D 1981 CACGACAGATTAATGAGTATGAGCAATATGATTTAGAAAGACAAAGGGCGGTAA 2040  
Q 1972 GCTCTGTTACTAATAAGAAATCCAAAGATTTGAAAACAGATGTAGAGATTAATCAT 2031  
D 2041 GCTCTGTTACTTCAAAATCCAAAGATTTGAAAACAGATGTAGAGATTAATCAT 2100  
Q 2032 GATCAATATTCGAATTAATGAGGTGTTTATCGATGATTTCTGTTAGATGAAGA 2091  
D 2101 GACCAAGTGTCAATATGAGTGTGATGTTATCAGATGAATTTCTGAGAGAAACGA 2160  
Q 2092 GAATTAAGTGAAGAAATATGCAAAACGACTCAAGTGAAGAACTTACTCA 2151  
D 2161 GAATTAATTTGAGAAATGAAATATGCAAGGACTCAGTATGAAGAACTTACTCA 2220  
Q 2152 GATCAAACTTCAATCATCAATAGCAACAGACTTCAATCTACTAATGAGCAATCG 2211  
D 2221 GATCAAACTTCAATCATCAATAGCAACAGACTTCAATCTACTAATGAGCAATCG 2280  
Q 2212 AATTCATCTATCCATGAACATCTGAACATGATGATGAGGAGAGTGAACATTA 2271  
D 2281 AACTTCCCTCTATTAATGAGCTATCGAATGATGATGAGGAGAGTGAACATTA 2340  
Q 2272 ATCAGAGAGAAATGAGTATTAAGAAATTAAGTCACTACCGGGGACTTTAAT 2331  
D 2341 ATTCAGAGAGAGAAATGAGTATTAAGAAATTAAGTCACTACCGGGGACTTTAAT 2400  
Q 2332 GAGTGTATCCGATTTATATCAAAAAATAGAGAGTGGAAATTAAGTATTAAT 2391  
D 2401 GAGTGTATCCGATTTATATCAAAAAATAGAGAGTGGAAATTAAGTATTAAT 2460  
Q 2392 CGGTACCAATTAAGAGGTATTAATGAAGATGATCAAGATTTAGATTAATTAAT 2451  
D 2461 CGGTATCAATTAAGAGGTATTAATGAAGATGATCAAGATTTAGATTAATTAAT 2520  
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D 2521 TACATGCGAAACATGAACATTTGATGTTCCAGTACCGAGTCCGATGAGCGCTTCA 2580  
Q 2512 GTTGAAGAGCCCAATCGAGAGTGGCGAAACCGAATGATGCGACCAATTTGAATGG 2571  
D 2581 GTTGAAGAGCCCAATCGAGAGTGGCGAAACCGAATGATGCGACCAATTTGAATGG 2640  
Q 2572 AATCTGATTAAGATTTCTCTGAGAGATGAGAAATATGTCGATATTCATCAT 2631  
D 2641 AATCTGATTAAGATTTCTCTGAGAGATGAGAAATATGTCGATATTCATCAT 2700  
Q 2632 TTCTCTTGAATATGATTAATGATGACAGATTTGATGAGATTAAGGCTGTGGGTG 2691  
D 2701 TTCTCTTGAATATGATTAATGATGATGATGATGATGATGATGATGATGATGATG 2760

Q 2692 GTATTCAGATTAAGAGCGAAGAAAGTCAAGACTAGGGAATCTGGAATTAATGA 2751  
D 2761 GTATTCAGATTAAGAGCGAAGAAAGTCAAGACTAGGGAATCTGGAATTAATGA 2820  
Q 2752 GAGAAACCAATTAATGAGAAAGCACTGTCTGTGTGAAGAGAGAGAAATATGGA 2811  
D 2821 GAGAAACCAATTAATGAGAAAGCACTGTCTGTGTGAAGAGAGAGAAATATGGA 2880  
Q 2812 GACAAAGTGAAGAACTCAATTTGAAACAAACGAGTATTAAGAGCGAAAGAGCT 2871  
D 2881 GACAAAGTGAAGAACTCAATTTGAAACAAACGAGTATTAAGAGCGAAAGAGCT 2940  
Q 2872 GTGATGCTTTATTTGATGATTTCTCAATATATAGATTTACAGGCGATACAAATGGC 2931  
D 2941 GTGATGCTTTATTTGATGATTTCTCAATATATAGATTTACAGGCGATACAAATGGC 3000  
Q 2932 ATGATTCATGCGGAGATTAATCTGTTCAATGAAATTCAGAGGCTTATCTGCAATTA 2991  
D 3001 ATGATTCATGCGGAGATTAATCTGTTCAATGAAATTCAGAGGCTTATCTGCAATTA 3060  
Q 2992 TCTGTATCCCGGTGTAATGCGGAATTTTGAAGATTAAGAGTGGCATTAATCACT 3051  
D 3061 CTTGTATCCCGGTGTAATGCGGAATTTTGAAGATTAAGAGTGGCATTAATCACT 3120  
Q 3052 GCAATCTCCCTATACATGCGAGAAATGCTGTTAAAAATGTTAATTAATGATTA 3111  
D 3121 GCAATGCTCTTAATACATGCGAGAAATGCTGTTAAAAATGTTAATTAATGATTA 3180  
Q 3112 GCATCTGGAATTTAAAGGCGATGATGATTAACAGAGCCATCACTGTTCTGCTT 3171  
D 3181 ACATGTTGGAATTTAAAGGCGATGATGATTAACAGAGCCATCACTGTTCTGCTT 3240  
Q 3172 GTATCCAGAAATGGAAGCGAAGTGTCAACAGCATGTCGCTGTCGCGGGCGTGGC 3231  
D 3241 GTATCCAGAAATGGAAGCGAAGTGTCAACAGCATGTCGCTGTCGCGGGCGTGGC 3300  
Q 3232 TATATCCCTCGTGTCAAGCGTACAAAGAGGATATGAGAGGTTGTAAACATCAT 3291  
D 3301 TATATCCCTCGTGTCAAGCGTACAAAGAGGATATGAGAGGTTGTAAACATCAT 3360  
Q 3292 GAAATCGAAGCAATTAACAGCAAGCTAAATTTAAAACTGTGAAGAGAGAGTAT 3351  
D 3361 GAAATCGAAGCAATTAACAGCAAGCTAAATTTAAAACTGTGAAGAGAGAGTAT 3420  
Q 3352 CCAAGGATACAGGAGGTATTAATGATTAATGATTAATGATTAATGATTAATGAT 3411  
D 3421 CCAAGGATACAGGAGGTATTAATGATTAATGATTAATGATTAATGATTAATGAT 3480  
Q 3412 TCCCGTAACTGTGATTAAGAGTGCATTAAGATTAATGATTAATGATTAATGAT 3471  
D 3481 TCCCGTAACTGTGATTAAGAGTGCATTAAGATTAATGATTAATGATTAATGAT 3540  
Q 3472 AAACCGATTAAGAGAGAAACGTATACAGATGATGAAGAGATTAATGATTAAT 3531  
D 3541 AAACCGATTAAGAGAGAAACGTATACAGATGATGAAGAGATTAATGATTAAT 3600  
Q 3532 GACAGAGGTATGATTAATCCACCACTACAGCTGTTATTAAGACAAAGAAATTA 3591  
D 3601 GACAGAGGTATGATTAATCCACCACTACAGCTGTTATTAAGACAAAGAAATTA 3660  
Q 3592 TACTTCCAGAAACCGATTAAGATTAAGATTAAGATTAAGATTAAGATTAAT 3651  
D 3661 TACTTCCAGAAACCGATTAAGATTAAGATTAAGATTAAGATTAAGATTAAT 3720  
Q 3652 GTAGACAGGTGATTAATCTCTTATGAGAGATAG 3687  
D 3721 GTAGATGCGTGAATTAATCTCTCAATGAGAGATAG 3756

RESULT 8  
US-08-474-038-3  
; Sequence 3, Application US/08474038

Patent No. 5679343  
GENERAL INFORMATION:  
APPLICANT: Domovian, William P.  
APPLICANT: Tan, Yiping  
APPLICANT: Jan, Christine S.  
APPLICANT: Gonzalez Jr., Jose M.  
TITLE OF INVENTION: BACILLUS THURINGIENSIS CRYET4 AND CRYET5  
TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS  
NUMBER OF SEQUENCES: 5  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Panlch Schwarz Jacobs & Nadel c/o A.S.  
STREET: 1601 Market Street, 36th Floor  
CITY: Philadelphia  
STATE: Pennsylvania  
COUNTRY: U.S.A.  
ZIP: 19103  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/474,038  
FILING DATE: 07-JUN-1995  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/176,865  
FILING DATE: 30-DEC-1993  
APPLICATION NUMBER: US 08/100,709  
FILING DATE: 29-JUL-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Egoif, Christopher  
REGISTRATION NUMBER: 27633  
REFERENCE/DOCKET NUMBER: 7205-49  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 215-757-1590  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 3934 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: double  
TOPOLOGY: circular  
MOLECULE TYPE: DNA (genomic)  
FEATURE:  
NAME/KEY: CDS  
LOCATION: 67..3756  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 2253..2272  
US-08-474-038-3

Query Match 72.9%; Score 2687.2; DB 1; Length 3934;  
Best Local Similarity 83.5%; Pred. No. 0;  
Matches 3088; Conservative 0; Mismatches 553; Indels 15; Gaps 3;

QY 1 TTGACTTCAATAGAAAATGAGATGAAATTAATAATGCTTATGATTCAGCTGTA 60  
Db TTGACTTCAATAGAAAATGAGATGAAATTAATAATGCTTATGATTCAGCTGTA 126  
QY 61 TCGAATATATCCACAAATGATCTATCAACAGATCTGATATGAGATTCTTGTGT 120  
Db TCGAATATATCCACAAATGATCTATCAACAGATCTGATATGAGATTCTTGTGT 186  
QY 121 ATAGCCGAGGGGAATTAATCAATCCACTGTTAGCCGATCAACAGTCCAAAGGATTT 180  
Db ATAGCCGAGGGGAATTAATCAATCCACTGTTAGCCGATCAACAGTCCAAAGGATTT 246  
QY 181 AACATGCTGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 240  
Db AACATGCTGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 306  
QY 241 TTTTATAGTTTCTTGTGGTGAATTAAGCCCGGCGGAGATCAAGTGAAGAAATTTTC 300

Db TTTTATAGTTTCTTGTGGTGAATTAAGCCCGGCGGAGATCAAGTGAAGAAATTTTC 366  
QY 301 CTAGAACATGCGAACCACTTAATAATCAAAATTAAGAAAATGCTAGAAATACGCA 360  
Db CTAGAACATGCGAACCACTTAATAATCAAAATTAAGAAAATGCTAGAAATACGCT 426  
QY 361 CTGCTCGATTAACAGGTTTGAAGATCTTGAAGCTTATCAACAGTCACTTGAAGAT 420  
Db ATGCTCGATTAACAGGTTTGAAGATCTTGAAGCTTATCAACAGTCACTTGAAGAT 486  
QY 421 TGGCTAGAAACCGTATGATGATGATGATGATGATGATGATGATGATGATGATGAT 480  
Db TGGCTAGAAACCGTATGATGATGATGATGATGATGATGATGATGATGATGATGAT 546  
QY 481 TTAGAACTTGATTTCTTAATGCGATGCGCTTTTGCATTAAGAAACCAAGATTTCCA 540  
Db TTAGAACTTGATTTCTTAATGCGATGCGCTTTTGCATTAAGAAACCAAGATTTCCA 606  
QY 541 TTTATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 600  
Db TTTATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 666  
QY 601 CTTTGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 660  
Db CTTTGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 726  
QY 661 GTGAAACAAACGAGATTAATCCGATTAATGCGATTAATGCGATTAATGCGATTAAT 720  
Db ATGATTAATCAAGAGATTAATCCGATTAATGCGATTAATGCGATTAATGCGATTAAT 786  
QY 721 AGCTTGAAGGGAACCAATGCGATTAATGCGATTAATGCGATTAATGCGATTAAT 780  
Db AACTTGAAGGGAACCAATGCGATTAATGCGATTAATGCGATTAATGCGATTAAT 846  
QY 781 AGCTTGAAGGGAACCAATGCGATTAATGCGATTAATGCGATTAATGCGATTAAT 840  
Db AGCTTGAAGGGAACCAATGCGATTAATGCGATTAATGCGATTAATGCGATTAAT 906  
QY 841 ATTAATCAAGAGATTAATCCGATTAATGCGATTAATGCGATTAATGCGATTAAT 900  
Db ATCAATCAAGAGATTAATCCGATTAATGCGATTAATGCGATTAATGCGATTAAT 966  
QY 901 GTTAAT-----ATGCAAGTATGATTAATGATTAATTAATGATTAATGATTAAT 954  
Db GCACCTTCAAGATTAATGATTAATGATTAATTAATTAATTAATTAATTAATTAAT 1026  
QY 955 ATGAGACTGCGGTTATCCGAGCCGATCTACTGATTTTCTAGAACCACTTAAT 1014  
Db ATGAGACTGCGGTTATCCGAGCCGATCTACTGATTTTCTAGAACCACTTAAT 1086  
QY 1015 TTAGCACTTCATCAAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1074  
Db TACAGTCACTTCATCAAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1146  
QY 1075 ATTCATCTGCGCAATGAGAGCGGATTAATTAATCTCAACGATGCTTACCA--AT 1131  
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Db ACTTCAATTAATCTGATTAATCAATCTTCTGAGAGGATTAATGATGATGATGATGAT 1266  
QY 1192 TATGAGAGGATGCTTATGAGGAAATTTTCACTTGAACCTAATGATGATGATGAT 1251  
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QY 1252 AGATTTAATTTTGAACCTTCAATCTTGAAGAGGATGATGATGATGATGATGATGAT 1311  
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QY 1312 CCTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1371



Db 1381 CCGATCAGGAGTGGGATTCAATTAATTGATTACAGAACTGAATTAACACAGAAACA 1440  
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Db 1441 ACAGAACGACCAAAATTAATGAATCATTAATAGTCATAGGTTATCTCATAGGCTCATTTCA 1500  
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Qy 1492 ACCATTAGTTCAGATAGCATTAACAACAATACATTGGTAAATGATTCAACTTAATTTCA 1551  
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Db 1621 GGTGTTACTGTGTGGAGGGCCAGAGTTTACAGGTGGGGATATCTTCTGTAGAACAAAT 1680  
Qy 1612 AATGTTAGTGTACATTAATATAGGTCTTAATTTTAATTAATACATTAACAGCGGTATCGC 1671  
Db 1681 ACCGTTACATTTGGAGATTAACGATTAATTAATGTCATTAATCCCAAGATATCGC 1740  
Qy 1672 GTGAGAGTTCGTTATGCTGCTTCTCAACAATGCTCCGAGGGTAACTGTCCGAGGGAGT 1731  
Db 1741 GTAAGGATTCGTTATGCTTCTTCTACAGATTTACAAATTTTTCACGAGAAATTAATGAAAC 1800  
Qy 1732 ACTACTTTTATGATCAGAGATTCCTAGTACTATGAGTCAATAGTCTTTGACATCTCAA 1791  
Db 1801 ACTGTTAAATTTGGTAAATTTCTCAAGAACATTAATAGGGGGATTAATTTAGAAATATGA 1860  
Qy 1792 TCATTTAGATTTGCAAGATTTCTGTAGTATTAATGTCATCTGGCAGTCAAACTGCTGA 1851  
Db 1861 AGTTTATGAACCTGACGATTTAGTACTCTTTTAATTTTAAATGCCCCAAAGACATTC 1920  
Qy 1852 ATAAGTATAGTAAATATGACAGTAAACAACCTTTCATTTGATAAATTTGAATTCAT 1911  
Db 1921 ACATGGGCTCTCAGATTTTTCATTAACAGAGTTTATTAATAGTAAAGTCGAATTTGTT 1980  
Qy 1912 CCAATTAATCTCAACCTTCGAAGCAGATTAAGATTTAGAAAAGGGCGCAAGCGGTGAAT 1971  
Db 1981 CCAAGAGGTTAACTTTGAGGCAAGATTAATGATTTAGAAAAGCAGAAAAGCGGTGAAT 2040  
Qy 1972 GCTCTGTTTATCTAATACGAATCCAAGAAATGAAAACAGATGTCAGATTAATCATATT 2031  
Db 2041 GCTCTGTTTATCTTCAAAATCCAAGAAATGAAAACAGATGTCAGATTAATCATATT 2100  
Qy 2032 GATCAAGTATCAATTTAGTGGGCTTTTATCCGATGAATTTCTGCTTAATGAAAAGAGA 2091  
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Qy 2092 GAATTAATCTGAGAAAGTGAATATGCGAAACGACTCAGTATGAAAGAACTTAATCTCA 2151  
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Qy 2152 GATCAAACTTCATCTCATCAATTAAGCAACAGACTTCATATCTAATAATGACATTCG 2211  
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Qy 2212 AATTTCAATCTATCTCAATGAAATCTGAAACATGATGATGGGGAGTGAACATTAACA 2271  
Db 2281 AATTTCCCTCTATTAATGATGCTGAAACATGATGATGGGGAGTGAATGTTAAC 2340  
Qy 2272 ATCCAGAAAGAAATGAAGTATTTAAAGAAATTAAGTCACTAACCGGGGACTTTTAAT 2331  
Db 2341 ATCCAGAAAGAAATGAAGTATTTAAAGAAATTAAGTCACTAACCGGGGACTTTTAAT 2400  
Qy 2332 GAGTGTATTCGACGATTTTAATCAAAAAATAGAGAGTCCGAATTTAAAGCTTATACT 2391  
Db 2401 GAGTGTATTCGACGATTTTAATCAAAAAATAGAGAGTCCGAATTTAAAGCTTATAG 2460  
Qy 2392 CGCTACCAATTAAGAGGTATATTTGAAGATGTCAGATTTAAGATATATTTGATTCGT 2451  
Db 2461 CGCTACCAATTAAGAGGTATATTTGAAGATGTCAGATTTAAGATATATTTGATTCGT 2520

Qy 2452 TATATGCGAAACATGAAACATTTGATGTTCCAGTTACCGAGTCCGATATGGCCGCTTTCA 2511  
Db 2521 TACATGCAAGCATGAAACATTTGATGTTCCAGTACCGATTTCCATATGGCCGCTTTCA 2580  
Qy 2512 GTTAAAGCCCAATTCGGAAGTGGGGAACCGAATGATGCGCACCAATTTTGAATGG 2571  
Db 2581 GTTAAAGCCCAATTCGGAAGTGGGGAACCGAATGATGCGCACCAATTTTGAATGG 2640  
Qy 2572 AATCCTATCTAGATTGTTCTGACAGATGGAAGAAATGTCGATCAATTCCTATCAT 2631  
Db 2641 AATCCTATCTAGATTGTTCTGACAGATGGAAGAAATGTCGATCAATTTCCATCAT 2700  
Qy 2632 TTCTCTTGGATATTTGAATTTGATGACAGACTTTCATGAGATTTAGGCGTGTGGTG 2691  
Db 2701 TTCCTTTGGATATTTGATGTTGGGTGACAGACTTTCATGAGATTTAGGCGTGTGGTG 2760  
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Qy 2752 GAGAAACATTAATTAAGAGAAAGCACTGCTCGTGTGAAGAGCAGAGAAATTAAGAGA 2811  
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Qy 2812 GACAAACGTGAAAACTCAATTTGAAACAAACGATATTAACAAGCAGAAAGAAAGCT 2871  
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Db 3061 CTGTTATCCAGGTGTAAATGCGAAATTTTGAAGAAATTAAGAGTTCGATTAATCACT 3120  
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Db 3121 GCAATGCTTATTAACGATGCGAAGATGCTTAAATATGATTAATTAATGATTA 3180  
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Db 3241 GTTATCCAGAAATGGGAAGCAAGTGTCAAGACAGTTGCGGTCTGTCCGGGGCGTGGC 3300  
Qy 3232 TATATCTCCTGTCACAGCTTCAAAAGAGATTAAGAGGATGATTAACGATTCAT 3291  
Db 3301 TATATCTCCTGTCACAGCTTCAAAAGAGATTAAGAGGATGATTAACGATTCAT 3360  
Qy 3292 GAAATGGAAGCAATTAACAAGCAATTAATTTAAATCTGTGAAGAAAGAGTAT 3351  
Db 3361 GAAATGGAAGCAATTAACAAGCAATTAATTTAAATCTGTGAAGAAAGAGTAT 3420  
Qy 3352 CCAAGGATTCAGGAAGTGTATTAATTAATCTGACACCAAGGTTACAGAGTATGTAAT 3411  
Db 3421 CCAAGGATTCAGGAAGTGTATTAATTAATCTGACACCAAGGTTACAGAGTATGTAAT 3480  
Qy 3412 TCCGTTATGCTGATATGATGATGAATTAATTAATCTACAGATCTGTTAATTAAC 3471  
Db 3481 TCCGTTATGCTGATATGATGATGAATTAATTAATCTACAGATCTGTTAATTAAC 3540  
Qy 3472 AAACGACTTAATTAAGAAAGAGTATTAACAAGTATCAAGAGATTAATCTTGTGAATAT 3531  
Db 3541 AAACGACTTAATTAAGAAAGAGTATTAACAAGTATCAAGAGATTAATCTTGTGAATAT 3600

QY 3532 GAGAGGGGATGTGATTTACCACTACAGCTGGTTATATGACAAAGATTGAA 3591  
DB 3601 GACAGAGGGGATGTGATTTACCACTACAGCTGGTTATATGACAAAGATTGAA 3660  
QY 3592 TACTCCAGAAACCGATAGTATGATTGAGATTGAGAAACGAGAGGAGTTTATT 3651  
DB 3661 TACTCCAGAAACCGATAGTATGATTGAGATTGAGAAACGAGAGGAGTTTATT 3720  
QY 3652 GTAGACAGCGTGAATTAATCTCTTATGAGGAATAG 3687  
DB 3721 GTAGATAGCGTGAATTAATCTCTTATGAGGAATAG 3756  
RESULT 9  
US-08-779-046-3  
; Sequence 3, Application US/08779046  
; Patent No. 5854053  
; GENERAL INFORMATION:  
; APPLICANT: Donovan, William P.  
; APPLICANT: Tan, Yiping  
; APPLICANT: Jan, Christine S.  
; APPLICANT: Gonzalez Jr., Jose M.  
; TITLE OF INVENTION: BACILLUS THURINGIENSIS CRYET4 AND CRYET5  
; TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS  
; NUMBER OF SEQUENCES: 5  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Panitch Schwarze Jacobs & Nadel c/o A.S.  
; ADDRESSEE: Nadel  
; STREET: 1601 Market Street, 36th Floor  
; CITY: Philadelphia  
; STATE: Pennsylvania  
; COUNTRY: U.S.A.  
; ZIP: 19103  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentin Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/779,046  
; FILING DATE: 06-JAN-1997  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/100,709  
; FILING DATE: 29-JUL-1993  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Egolf, Christopher  
; REGISTRATION NUMBER: 27633  
; REFERENCE/DOCKET NUMBER: 7205-49  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 215-757-1590  
; INFORMATION FOR SEQ ID NO: 3:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 3934 base pairs  
; TYPE: nucleic acid  
; STRANDEDNESS: double  
; TOPOLOGY: circular  
; MOLECULE TYPE: DNA (genomic)  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: 67..3756  
; NAME/KEY: misc\_feature  
; LOCATION: 2253..2272  
US-08-779-046-3  
Query Match 72.9%; Score 2687.2; DB 2; Length 3934;  
Best Local Similarity 83.5%; Pred. No. 0;  
Matches 3086; Conservative 0; Mismatches 593; Indels 15; Gaps 3;  
QY 1 TTGACTCAATGAGAAATGAGAAATTAATTAATGCTTATGATTCAGCTGTA 60  
DB 67 TTGACTCAATGAGAAATGAGAAATTAATTAATGCTTATGATTCAGCTGTA 126

QY 61 TCGAATCATTCACACAAATGATCTATCAAGATGCTGTTATGAGGATCTTTGTGT 120  
DB 127 TCGAATCATTCACACCAATGAAATCTATCAAGATGCTGTTATGAGGATCTTTGTGT 186  
QY 121 ATAGCCGAGGGGAAATTAATCAATCCACTGTTAGCGATCAAGTCCAAACGGGATTT 180  
DB 187 GTAGCCGAGGGGAAATTAATCAATCCACTGTTAGCGATCAAGTCCAAACGGGATTT 246  
QY 181 AACATAGCTGTAGAAATTAATCAATCCACTGTTAGCGATCAAGTCCAAACGGGATTT 240  
DB 247 AACATAGCTGTAGAAATTAATCAATCCACTGTTAGCGATCAAGTCCAAACGGGATTT 306  
QY 241 TTTTATAGTTTTCTGTTGCTGAATTAATGCCCCCGGAGAGATCAAGTGGGAAATTTTC 300  
DB 307 TTTTATAGTTTTCTGTTGCTGAATTAATGCCCCCGGAGAGATCAAGTGGGAAATTTTC 366  
QY 301 CTAGAAACATGCAACCACTTAATAATCAACAAATTAAGAAATCTAGAAATACGCA 360  
DB 367 CTAGAAACATGCAACCACTTAATAATCAACAAATTAAGAAATCTAGAAATACGCT 426  
QY 361 CTGCTCGATTAACAGGTTAGAGATTCCTTAGAGCTTATCAACAGTCACTGAAGAT 420  
DB 427 ATTGCTCGATTAACAGGTTAGAGATTCCTTAGAGCTTATCAACAGGCTCTTGAACCT 486  
QY 421 TGGCTAGAAACCGGATGATGCAAGAGAGAGAGTCTTTATACCAATATATAGCC 480  
DB 487 TGGCTAGAAACCGGATGATGCAAGAGAGAGAGTCTTTATACCAATATATAGCC 546  
QY 481 TTAGAACTGATTTCTTAATGCGATGCGCTTTTGGCAATTAAGAAACCAAGATTTCA 540  
DB 547 TTAGAACTGATTTCTTAATGCGATGCGCTTTTGGCAATTAAGAAACCAAGATTTCA 606  
QY 541 TTATTAATGATTAATGCTCAAGCTGCAAAATTAACCTATTAATTAATGAGATGCTCT 600  
DB 607 TTATTAATGATTAATGCTCAAGCTGCAAAATTAACCTATTAATTAATGAGATGCTCT 666  
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QY 781 AGCTTGAAGAGCAAAATGCTGATTAATGCTGATTAATGCTGATTAATGAGATGCTCT 840  
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Oy 1912 CGAATTAATGCAACCTTTCGAAAGCAATACGATTTTGAAGGCGCGAAGGCGGTAAAT 1971  
Db 1981 CCGACAGAGGTAATTTTGAAGCAATATGATTTTGAAGGCGCGGTAAAT 2040  
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Db 3181 ACATGTTGGAATGTAAGGCGATGATGTAACAACAGACCATCAACGTTCTGTCTT 3240  
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Db 3361 GAAATGAGACATACAGACGACTTAAATTTAAAACTGTGAAGAAGAGTGTAT 3420  
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## RESULT 10

US-08-881-340-3  
 ; Sequence 3, Application US/08881340  
 ; Patent No. 5942658

## GENERAL INFORMATION:

APPLICANT: Donovan, William P.

APPLICANT: Tan, Yeping

APPLICANT: Gonzalez Jr., Jose M.

TITLE OF INVENTION: BACILLUS THURINGIENSIS CRYET4 AND CRYET5

TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS

NUMBER OF SEQUENCES: 5

CORRESPONDENCE ADDRESS:

ADDRESSEE: Panlitch Schwarze Jacobs & Nadel c/o A.S.

ADDRESSER: Nadel

STREET: 1601 Market Street, 36th Floor

CITY: Philadelphia

STATE: Pennsylvania

COUNTRY: U.S.A.

ZIP: 19103

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent in Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/881,340

FILING DATE: 24-JUN-1997

CLASSIFICATION: 424

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/100,709

FILING DATE: 29-JUL-1993

ATTORNEY/AGENT INFORMATION:

NAME: Egolf, Christopher

REGISTRATION NUMBER: 27633

REFERENCE/DOCKET NUMBER: 7205-49

TELECOMMUNICATION INFORMATION:

TELEPHONE: 215-757-1590

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 3934 base pairs

TYPE: nucleic acid

STRANDEDNESS: double

TOPOLOGY: circular

MOLECULE TYPE: DNA (genomic)

FEATURE:

; NAME/KEY: CDS  
 ; LOCATION: 67..3756  
 ; FEATURE:  
 ; NAME/KEY: misc feature  
 ; LOCATION: 2253..2272  
 ; US-08-881-340-3

Query Match 72.9%; Score 2687.2; DB 2; Length 3934;  
 Best Local Similarity 83.5%; Pred. No. 0;  
 Matches 3088; Conservative 0; Mismatches 593; Indels 15; Gaps 3;

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Qy 2992 TCTGTATCCCGGATGTAATATGCGAAATTTTGAAGATTAAGAGTGCATTTATCACT 3051  
Db 3061 CTGTATATCCAGATGTAATATGCGAAATTTTGAAGATTAAGAGTGCATTTATCACT 3120  
Qy 3052 GCAATCTCCCTATATGATGCGAAGAAATGCTTTAAATATGATTTAATATGATTTA 3111  
Db 3121 GCAATGCTCTTATATGATGCGAAGAAATGCTTTAAATATGATTTAATATGATTTA 3180

QY 3112 GCATGCTGGAATGTAAGGCAATGATGTAACAAGAGCATCAAGCTTCTGCTT 3171  
DB 3181 ACATGTTGGAATGTAAGGCAATGATGTAACAAGAGCATCAAGCTTCTGCTT 3240  
QY 3172 GTATGCCGAATGGAAGCAAGTGTCAAGAGCTTGTGCTGCTGCGGGGCGTGGC 3231  
DB 3241 GTTATCCGAATGGAAGCAAGTGTCAAGAGCTTGTGCTGCTGCGGGGCGTGGC 3300  
QY 3232 TATATCTCGTGTCAAGGCTTCAAGAGGATGAGAGGCTTGTGTAACATTCAT 3291  
DB 3301 TATATCTCGTGTCAAGGCTTCAAGAGGATGAGAGGCTTGTGTAACATTCAT 3360  
QY 3292 GAAATGAGAACTATCAAGCACTTAAATTTAAACCTGTGAAGAGAGAGTGTAT 3351  
DB 3361 GAAATGAGAACTATCAAGCACTTAAATTTAAACCTGTGAAGAGAGAGTGTAT 3420  
QY 3352 CCAACGGAATGAGAAAGTGTATGATGATGATGATGATGATGATGATGATGAT 3411  
DB 3421 CCAACGGAATGAGAAAGTGTATGATGATGATGATGATGATGATGATGATGAT 3480  
QY 3412 TCCCGTAATGCTGATATGAGATGATGATGATGATGATGATGATGATGATGAT 3471  
DB 3481 TCCCGTAATGCTGATATGAGATGATGATGATGATGATGATGATGATGATGATGAT 3540  
QY 3472 AAACCGATATGAGAAAGTGTATGATGATGATGATGATGATGATGATGATGAT 3531  
DB 3541 AAACCGATATGAGAAAGTGTATGATGATGATGATGATGATGATGATGATGAT 3600  
QY 3532 GACAGAGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3591  
DB 3601 GACAGAGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3660  
QY 3592 TACTTCCGAAGAAACGATTAAGTATGATGATGATGATGATGATGATGATGAT 3651  
DB 3661 TACTTCCGAAGAAACGATTAAGTATGATGATGATGATGATGATGATGATGAT 3720  
QY 3652 GTAGACAGCTGGAATTAATCTCTTATGAGAGATAG 3687  
DB 3721 GTAGATAGCTGGAATTAATCTCTTATGAGAGATAG 3756

RESULT 11  
US-08-040-751-4  
Sequence 4, Application US/08040751  
Patent No. 5407825  
GENERAL INFORMATION:  
APPLICANT: Sick, August J  
TITLE OF INVENTION: No. 5407825: Bacillus thuringiensis isolates  
TITLE OF INVENTION: active against Lepidopteran pests and Genes Encoding No. 54078  
NUMBER OF SEQUENCES: 4  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: DAVID R. SALIMANCHIK  
STREET: 2421 N.W. 41st STREET, SUITE A-1  
CITY: GAINESVILLE  
STATE: FL  
COUNTRY: USA  
ZIP: 32606  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/040,751  
FILING DATE: 19930329  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: SALIMANCHIK, DAVID R.  
REFERENCE/DOCKET NUMBER: MA39.C1.D3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 904-375-8100

TELEFAX: 904-372-5800  
TELEX:  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 3522 base pairs  
TYPE: NUCLEIC ACID  
STRANDEDNESS: double  
TOPOLOGY: linear  
MOLECULAR TYPE: DNA (genomic)  
HYPOTHETICAL: NO  
ANTI-SENSE: NO  
ORIGINAL SOURCE:  
ORGANISM: Bacillus thuringiensis  
STRAIN: aizawai  
INDIVIDUAL ISOLATE: PS81A2  
IMMEDIATE SOURCE:  
LIBRARY: LambdaGem - 11 (tm) Library of August Sick  
CLONE: 81A2  
US-08-040-751-4

Query Match 48.6%; Score 1793.4; DB 1; Length 3522;  
Best Local Similarity 71.9%; Pred. No. 0;  
Matches 2497; Conservative 0; Mismatches 861; Indels 117; Gaps 7;

QY 228 ACAATAGCTAGTTTATATGTTTCTTGTGTAATTATGAGCCCGGCGAGATGA 287  
DB 147 ACTAGGGAATTTATATCTTGCTGTTGATGATATGAGGCGCTATAGTCTTCA 206  
QY 288 GTGGGAATTTTCTTGAACATGTCGAACAATTAATTAACAATAAGAAATGC 347  
DB 207 ATGGATATATTTTATGACCAATTAAGCTATGATGATGATGATGATGATGATGAT 266  
QY 348 TAGGAATACGCACTTGTGATTAACAGCTTTAGAGATTCCTTTAGAGCTATCA 407  
DB 267 TAGGAATACGCACTTGTGATTAACAGCTTTAGAGATTCCTTTAGAGCTATCA 326  
QY 408 GTCACTTGAAGTTGGCTGAGAAACCGTATGATGATGATGATGATGATGATGAT 467  
DB 327 TGTCTTTAAACCTGGAAAGTATGATCTATATCAAGCTTTAAGAAAGATGCGTAT 386  
QY 468 CCAATATATAGCTTATGATGATGATGATGATGATGATGATGATGATGATGAT 527  
DB 387 TCAATTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 446  
QY 528 CCAAGAGTTCCATTTATATGATGATGATGATGATGATGATGATGATGATGAT 587  
DB 447 TTATGAATTCCTCTTTATGATGATGATGATGATGATGATGATGATGATGAT 506  
QY 588 GAGAGTGGCTCTCTTTTGTGATGATGATGATGATGATGATGATGATGATGAT 647  
DB 507 GAGAGTGGCTCTCTTTTGTGATGATGATGATGATGATGATGATGATGATGAT 566  
QY 648 TTATGAGCCCAAGTGAACAAGAGATTAATTCGATATGCGTAGATGATTA 707  
DB 567 TTATATGATTTTATGATGATGATGATGATGATGATGATGATGATGATGATGAT 626  
QY 708 TACAGGCTTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 764  
DB 627 TACGGGCTTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 686  
QY 765 ATTCCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 824  
DB 687 GTTATGAAGAGTTTAACAATGATGATGATGATGATGATGATGATGATGATGAT 746  
QY 825 CACTGCACCTTATCCAAATATGATGATGATGATGATGATGATGATGATGATGAT 884  
DB 747 TTCTAATTAATTCGAATTCGAATTCGAATTCGAATTCGAATTCGAATTCGA 806  
QY 885 AATTTGAGCAAGGGGTAATATGATGATGATGATGATGATGATGATGATGATGAT 944  
DB 807 -----GGTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 842  
QY 945 GTTTCCGCTATAGAGCTGCGGTTATCGAAGCCGCACTTACTTATTTCTAGACA 1004



Db 843 TTTCGAGAGTATGAAATTCAGCTATTAGAGTCCCATCTTATGGAATTTCTTAATTA 902  
Qy 1005 ACTTACAAATTTTATGACATTCATCAGATGAGTCTACTAGCATATGACTTACTGCG 1064  
Db 903 TATATATTATGACATCGATTTA-----ATTAGAGCGCTTCACTATTGGGC 947  
Qy 1065 GGGGACACAACTTCATCTCGCCAAATAGAGCGGATTAATTAATCTCAACGATGGGTC 1124  
Db 948 GGGGCAATCGTAACTTCTCATATTTACCGGTAGTTCGCAAGTGTAAAGTCCCTCAATA 1007  
Qy 1125 TACCAATCTTCTATTAACTCTGTAATATCATCTTCTCTGAGAACGTAATTTGAC 1184  
Db 1008 CGGATTAATCTGCAACCGCAAGCCGAGTCGAACTATGCTCTAGCACTTTCCAGGTCT 1067  
Qy 1185 TGAATCATATGACAGAGTCTTCTATGGGAATTTACCTTGAACCTATTCATGGTCCC 1244  
Db 1068 TATCTATTTTATAGAACACTATCAGACCTTTCTCCGAAGATCCGATTAATATATGCC 1127  
Qy 1245 TACTGTATGATTTAATTTTNGAACCCTCAGAAATCTTTGAAAGAGTACTGTAATA 1304  
Db 1128 AATATTAGGAATTAATGTAGTGAAGGGGTAGGATTCATTCAACCAATATATGGTGAAGT 1187  
Qy 1305 TATGTAACCTATGAGTCACTGGGCTTCAATTAAGATTCAGAACTGAATTAACACC 1364  
Db 1188 TCTATATAGAGAGAGAGAACATGATTCCTGTGATGAGTTGCCAATTA-----CGG 1241  
Qy 1365 AGAACAACAGAGACGCAAAATTAATGATCATATAGTCATAGGTAATCTCAATAGGGCT 1424  
Db 1242 TGAATATCTATTAGTGGATATAGTCAATTAATAGTCACTTAACATTAACAGGTCTT 1301  
Qy 1425 CATTTCACATCTAGGGTGATGATGACATGATTAATCTTGGACGACCGATGTCAGATCG 1484  
Db 1302 ATATTAATCTAATTAATTAATCTAGTTCGCAATTTGTGTCACATCAAGTCTACTGA 1361  
Qy 1485 TACAATTAACATTAATGATTCAGATAGCATTAACAAATTAACATTTGTAATTAATCACT 1544  
Db 1362 TCGAAATTAATTAATCTATCCGATGATTAATTAACAAATTAACATTTGTAATTAATCACT 1421  
Qy 1545 TAATTCAGGTAACCTCTGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1604  
Db 1422 TACTTCAAGTACTCTGTATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1481  
Qy 1605 TAACTTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1664  
Db 1482 TAACTTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1541  
Qy 1665 GATTCGCGTGAAGTTCGTATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1724  
Db 1542 GATTCGCGTGAAGTTCGTATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1601  
Qy 1725 AGGAGTACTACTTGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1784  
Db 1602 AGGAGTACTACTTGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1661  
Qy 1785 ATCTCAATCATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1844  
Db 1662 ATCTCAATCATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1721  
Qy 1845 TGTGGAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1904  
Db 1722 TGTGGAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1781  
Qy 1905 AATCATTCATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1964  
Db 1782 AATCATTCATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1841  
Qy 1965 GGTGAATGCTCTGTTTACTTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2024  
Db 1842 GGTGAATGCTCTGTTTACTTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1901  
Qy 2025 TCAATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2084

Db 1902 TCAATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1961  
Qy 2085 AAGAGAAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2144  
Db 1962 AAGAGAAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2021  
Qy 2145 ACTTCAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2204  
Db 2022 ACTTCAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2064  
Qy 2205 GCAATGAAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2264  
Db 2065 -----CGTGGCTGGAGAGAGATGACGA 2087  
Qy 2265 CATTACATTCAGAAAGAAATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2324  
Db 2088 TATTAATCATGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2147  
Qy 2325 TTTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2384  
Db 2148 CTTTGAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2207  
Qy 2385 TTAATCTGCTACCAATTAAGAGGATTAATGATGATGATGATGATGATGATGATGATGATGAT 2444  
Db 2208 CTATTAACCTTACCAATTAAGAGGATTAATGATGATGATGATGATGATGATGATGATGATGAT 2267  
Qy 2445 GATTCTGTTAATGAGCAATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2504  
Db 2268 AATTCGCTACATGCAAAACGAAACGATTAATGATGATGATGATGATGATGATGATGATGATGAT 2327  
Qy 2505 GCTTTGATGAAAGCCCAATGCGAAGTGGAGAACCGAATGATGATGATGATGATGATGATGAT 2564  
Db 2328 GCTTCAATGATGAAAGCCCAATGCGAAGTGGAGAACCGAATGATGATGATGATGATGATGAT 2387  
Qy 2565 TGAATGAATCCGATCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2624  
Db 2388 TGAATGAATCCGATCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2447  
Qy 2625 CCATCAATTTCTCTTGGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2684  
Db 2448 CCATCAATTTCTCTTGGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2507  
Qy 2685 GTGGGTGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2744  
Db 2508 GTGGGTGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2567  
Qy 2745 TATTAAGAGAAACCTTAATTAAGAGAGATGATGATGATGATGATGATGATGATGATGATGAT 2804  
Db 2568 TATTAAGAGAAACCTTAATTAAGAGAGATGATGATGATGATGATGATGATGATGATGATGAT 2627  
Qy 2805 ATGAGAGACAAACGTGAAACCTTAATTAAGAGAGATGATGATGATGATGATGATGATGATGAT 2864  
Db 2628 ATGAGAGACAAACGTGAAACCTTAATTAAGAGAGATGATGATGATGATGATGATGATGATGAT 2887  
Qy 2865 AGAAGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2924  
Db 2688 AGAAGCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2747  
Qy 2925 CATTGCAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2984  
Db 2748 CATTGCAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2807  
Qy 2985 AGAATATGCTGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3044  
Db 2808 AGAATATGCTGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2867  
Qy 3045 TATCACTGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3104  
Db 2868 TATCACTGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2927  
Qy 3105 TGAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3161  
Db 2928 TGAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2987

QY	3162	TTCTGCTCTTGTATATCCAGATATGGAAAGCAAGAGTGCACAAGAGTTCGCTGTGCG	3221
Db	2888	TTCCGTCCTTGTGTGTCCCGGAATGGGAAGCAGMAGTGCACMAACMAATTCGTCTGTCC	3047
QY	3322	GGGGCGTGGCTATATCTCTCCGTGTCAACGCTTACMAAGAGGATATGAGAGGGTTGTGT	3281
Db	3048	GGGGCGTGGCTATATCTCTCCGTGTTCAGCGCTACMAAGAGGATATGAGAGGGTTGTGT	3107
QY	3282	AACGATCCATGAATATCGAAGCAATATACAGAGAACTAAATTTTAAAACTGTGAAGAA	3341
Db	3108	AACATTCATGATGATCGAAGCAATATACAGAGAACTAAATTTTAAAACTGTGAAGAA	3167
QY	3342	GGAAAGTATCCAAACGATACAGGAACGTGTAAATGATTAATCTGCACCAAGGTACAGC	3401
Db	3168	GGAAAGTATCCAAACGATACAGGAACGTGTAAATGATTAATCTGCACCAACAGGTACAGC	3227
QY	3402	AG-----TATGTAATTCGCCGTAATGCTGATATAGATGATATGAAGTTGA	3449
Db	3228	AGGATCCACAGATTCATGATTAATTCGCCGTAATTCAGATATGAGATGCAATATGAATGA	3287
QY	3450	TACTACAGCATCTGTAAATTAACAAACGACTTATGAGAAGAAACGTATACAGATGACG	3509
Db	3288	TACTACAGCATCTGTAAATTAACAAACGACTTATGAGAAGAAAGGTATACAGATGAC	3347
QY	3510	AAGGATTAATCAATGTGTGAATATGACAGAGGGATATGTAATTAATCCACACATACAGCTG	3565
Db	3348	AGGAGATATACATCTGTGTGAATATGACAGAGGGATATGTAATTAATCCACACATACAGCTG	3407
QY	3570	TTATATGACAAAGAATATGAATATCTTCCACAGAAACCGATTAAGTATGATTTGAGATTGG	3628
Db	3408	TTATGTGACAAAGAATATGAAGTATCTTCCACAGAAACCGATTAAGTATGATTTGAGATTGG	3467
QY	3630	AGAAACGGAAGGAAGTTTATTTGTAAGACAGCTGGAATTAATCTCCTTAATGAGAGAA	3684
Db	3468	AGAAACGGAAGGAAGTTTATTTGTAAGACAACTGCAATTAATCTCCTTAATGAGAGAA	3522

RESULT 12  
 US-08-291-368-1  
 Sequence 1, Application US/08291368  
 Patent No. 5686069  
 GENERAL INFORMATION:  
 APPLICANT: Payne, Jewel M.  
 APPLICANT: Sick, August J.  
 TITLE OF INVENTION: No. 5686069e1 Bacillus thuringiensis Isolates  
 TITLE OF INVENTION: Active Against Lepidopteran Pests  
 NUMBER OF SEQUENCES: 27  
 CORRESPONDENCE ADDRESSES:  
 ADDRESSEE: Saliwanchik & Saliwanchik  
 STREET: 2421 N.W. 41st Street, Suite A-1  
 CITY: Gainesville  
 STATE: FL  
 COUNTRY: US  
 ZIP: 32606  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: Patentin Release #1.0, Version #1.25  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/08/291,368  
 FILING DATE:  
 CLASSIFICATION: 536  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: 07/597,607  
 FILING DATE: 15-OCT-90  
 CLASSIFICATION: 536  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Saliwanchik, David R.  
 REGISTRATION NUMBER: 31,794  
 REFERENCE/DOCKET NUMBER: MA50. C1  
 TELECOMMUNICATION INFORMATION:

TELEPHONE: (904)375-8100  
TELEFAX: (904)372-5800  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 3522 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: double  
TOPOLOGY: linear  
MOLECULE TYPE: DNA (genomic)  
HYPOTHETICAL: NO  
ANTI-SENSE: NO  
ORIGINAL SOURCE:  
ORGANISM: *Bacillus thuringiensis*  
STRAIN: aizawai  
INDIVIDUAL ISOLATE: PS81A2  
IMMEDIATE SOURCE:  
LIBRARY: lambdaagem - 11 (cm) Library of August Stock  
CLONE: 81A2  
US-08-291-368-1

Query Match	48.6%;	Score 1793.4;	DB 1;	Length 352;
Best Local Similarity	71.9%;	Pred. No. 0;		
Matches 2497;	Conservative 0;	Mismatches 861;	Indels 117;	Gaps 77;

QY	228	ACAAATGCTAGTATTTATATGTTTCTTGTGGGAATTAATGGCCCGCGCAGAAAGTCA	287
Db	147	ACTAGGGGATTTTAATCTTGCGTTGTTGATGTAAATATGGGGGGGCTATAGGTCTTCACA	206
QY	288	GTGGGAAATTTTCCTAGACATGTCGACAACTTATTAATTCACAAATTAACGAAATGC	347
Db	207	ATGGGATATTTTTTTTAGAGCAAAATGAGCTATGATCGGCCAAGAAATAGGGAATTCGC	266
QY	348	TAGGAATAGCGCACTTGCTGATTAACAAGTTTAGAGATTCCTTTAGAGCTATCAACA	407
Db	267	TAGGAATACAGSCAATTTCTAGATTACAAGGCTTAGAGAACTTTACCGAATTTACACAA	326
QY	408	GTCACCTGAAGATTGCTAGAAAAACCGTGATGATGCAAGAACGGAAGTGTCTTTATAC	467
Db	327	TGCTTTAAAACTGGGAAATAGATCTTACTATTCACGATTAAGAGAAGAGTGGTAT	386
QY	468	CCAATATATAGCCTTAGAACCTGATTTTCTTAATGCGATGCGCTTTTCGCAATTGAAA	527
Db	387	TCATTTAATGACATGAACAGTGTCTTACACAGCATTCCTCTTTTTCAGTTCAAG	446
QY	528	CCAGAACTTCATTTAATATGATATGCTCAAGCTGCAATTTACACCTATTAATT	587
Db	447	TTATGAATTCCTCTTTATCAGATATATGTTCAAGCTGCAAAATTTAATATATGTTTT	506
QY	588	GAGAGATGCGCTCTTTTGTAGTAGTAATTTGGGCTTACATCCGAGAAATTAACGTTA	647
Db	507	GAGGATGTTTCAAGTGTGTTGGACACAGTTGGGGATTGATGTAGCAACATCAATAGTCG	566
QY	648	TTATGACCGCCAAAGTGGAACAAACGAGAGATTATCCGACTATTCGTAGAAATGATAA	707
Db	567	TTATATATGATTTAATCTAGGCTTATTTGGCGAATATACGATTAATCTGTAGTTGSTATAA	626
QY	708	TACAGTCTAATAGCTTGAAGGGAACAAATGCCG---CAAGTTGGTGGCTTATATCA	764
Db	627	TACGGGTGTAATGTTGTTTACACGTAATGGAAGGGGTACGAGSAGGGCAGATTTAATAG	686
QY	765	ATTCGCTAGAGANTTAAGTTAGGGGTATTAAGATCTAGTGGCACTATTTCCAGACTATGA	824
Db	687	GTTTTAGAAGAGATTAACAAATATCAATGATTAGATTAATTAATTTCTTTTCCAAATTCGA	746
QY	825	CACTCGCACTTATCCATTAATAACGATGCTCAGTTAAACAAGGAGTTTATCAGACGC	884
Db	747	TTCTAGATTAATTCATTCGACAACTATTCATTAAACGGGGAGATATATACGATCC	806
QY	885	AATTGAGCAACAGGGGTAAATAATGGCAAGTATGAATTGGTATATAATAATGACCTTC	944
Db	807	-----GGTAATTAATATAACGATTAATAGATTACCCCAAG	842
QY	945	GTTTTCGCTATAGAGACTGGGTTATTCGAGCCCGCATCTACTGATTTTCTAGAAACA	1006

D	b		843	TTCGAGAGTATGAAAATTACGCTATTAGAAAGTCCCATCTTAATGAATTTCTTAAATRA	902
O	y		1005	ACTTACAATTTTAGCACTTCATCAGATGAGTGCTACTAGGCATATGACTTACTGCG	1064
D	b		903	TATAATTATTGACACTGATTTA-----ATTAGAGCGTTCACTAATTGGGC	947
O	y		1065	GGGGGACACAAATTCAAATCTCGGCCCAATAGAGCGGATTAATATCTCAAGCATGGGCT	1122
D	b		948	GGGGGATCGGTGTAACCTTTCATTTTTACCAGTAGTTCCGAGTGAATMACTCCCCTCAATA	1007
O	y		1125	TACCAATACTTCTATTTAATCCGTAGAANTATCATTTCTCTCGAGACGTATATTGAC	1184
D	b		1008	CGGGAATTACTGCAAAACGCAAAACGAGTCCGAACTATGCTCTTACACTTTTCCAGGTCT	1067
O	y		1185	TGAATCATATGACGAGAGTGCTTCTATGGGGAAATTAACCTTGAACTTAATGATGTC	1244
D	b		1068	TAACTATTTTATAGAACACTATCAGACCCCTTTCTCCGAAGATCCGATTAATATTATG	1127
O	y		1245	TACTGTAGATTTAATTTTAGAACCCCTCAGAAATCTTTGAAAGAGTACTCTTAATA	1304
D	b		1128	AACATTAGGAATTAATGTATGTGACAGGGGGTAGAATTCATTCAACCAAATTAATGGTAAGT	1187
O	y		1305	TAGTCACCCATATGAGTCACTCGGGCTTCAATTAAAGATTCAGAACTGAATTAACAC	1364
D	b		1188	TCTATATATGAMAGAGAGGACATGATGATTTCTTGATATAGTTGCCAATTTGA-----CGG	1241
O	y		1365	AGAAACAAACAGAACGACCAAAATTAATGATATATAGTACATAGTATCTCACATAGGCT	1424
D	b		1242	TGAGAAATTCATTAAGTTGGATATAGTCATAGATTAAGTCACTGATTAACCAAGTCGTT	1301
O	y		1425	CATTTCACAACTTAGGGTGATGTAACCAAGTATATTTCTTGACGCAACGCTAGTGCAGATCG	1484
D	b		1302	ATATATATCTAATATATTAATACAGCTTCCCAACATTTGTTGGACATCACTACAGTCTACTGA	1361
O	y		1485	TACAAATACATTAAGTTCAAGATAGATTAACAAATACCAATTTGGTAATCATTTCAACT	1544
D	b		1362	TCGAATATTAATCTATCCGAGATGTAATTAACAAATTAACATTTGGTAATCATTTCTCCT	1421
O	y		1545	TAAATCAGGTACCTCTGTAGTCAGTGGCCCCAGAGATTTACAGAGGGGATATATCCGAC	1604
D	b		1442	TACTTCAGGTACTCTGTATGTACAGAGGCCCAAGATTTACAGAGGGGATATATCCGAC	1481
O	y		1605	TAACTTAATGGTATGTATCTAATGATGGGTCTTAATTTTAATATACATCATTAACAGCG	1664
D	b		1482	TAACTTAATGGTATGTATGTATCTAATGATGGGTCTTAATTTTAATATACATCATTAACAGCG	1541
O	y		1665	GTAATGCGTGAAGTTCGTTATGCTGCTTCTCAAAACAATGGTCTGAGGGTAACTGTCGG	1724
D	b		1542	GTAATGCGTGAAGTTCGTTATGCTGCTTCTCAAAACAATGGTCTGAGGGTAAATGTTGG	1601
O	y		1725	AGGAGTACTCTTTTGATCAAGGATCCCTAGTACTATGATGCGAAATGAGTCTTTGAC	1784
D	b		1602	AGGAGTACTCTTTTGATCAAGGATCCCTAGTACTATGATGCGAAATGAGTCTTTGAC	1661
O	y		1785	ATCTCAATCATTTAGATTTGCAAGATTTCTGTAGTATTAAGTGCATCTGCACTCAAC	1844
D	b		1662	ATCTCAATCATTTAGATTTGCAAGATTTCTGTAGTATTAAGTGCATCTGCACTCAAC	1721
O	y		1845	TGCTGGAATTAAGTATTAAGTATTAATGCAAGTACAAACGTTTCACTTTGATTAATTTGA	1904
D	b		1722	TGCTGGAATTAAGTATTAAGTATTAATGCAAGTACAAACGTTTCACTTTGATTAATTTGA	1781
O	y		1905	ATTCATTCCAATTAATGCAACCTTCGAGCAAGTAATGCAATTTTGAAGGGCGCAAGAGC	1964
D	b		1782	ATTCATTCCAAGTATGTCACATTTGAAAGCAAGAAATATATTTAGAAAGACACAAAGGC	1841
O	y		1965	GGTGAATGCTCTGTTTACTTAATAGCAATCCCAAGAGATTTGAAGACAGTGTGACGATTA	2024
D	b		1842	GGTGAATGCTCTGTTTACTTCTTCCAATCAAAATGCAAGTTAAAAACAGATGTGACGATTA	1901
O	y		2025	TCATATTGATCAATGATCAATTTAATGAGCGTGTATTATCGATGATTTCTGCTTAGATGA	2084

Db	1902	TCATATTTGATCAAGATATCCAAATTTTGTGATTTGTTATTCGATGAATTTTGTCTGGATGA	1961
Qy	2085	AAAGAGAGATTTACTTGGAAAATGTAATATCGCAACGACTCGTGTGAAAGAACTT	2144
Db	1962	AAAGCGAAGATTTGTCCGAGAAAAGTCAAAACATGCGAAGCGACTCATGTGTAGCGGAATTT	2021
Qy	2145	ACTCCAAAGTCCAAACTTCACTCATCATATAGCAACCAACTTCAATATCTACTAATGA	2205
Db	2022	ACTTCAAAGTCCAACTTCAGAGGATCAATAGCGAACCAAGC-----	2065
Qy	2205	GCAATCGAATTTCACTCTATCCATGAACAAATCTGAAATGATGATGTGGGAAAGTGAAGA	2265
Db	2065	-----CGTGGCTGGAAGAAATGACGA	2087
Qy	2265	CATTACAAATCCAGAGAAATGACGTATTTAAAGAAATTAACGTACACTACCGGGAC	2324
Db	2088	TATTAACCTCCAAAGGAGAGATGACGTATTCAAAGAAATTAACGTACACTACCGGTAC	2147
Qy	2325	TTTTTAATGAGTTTATCCGACGTATTTATATCAAAAAATAGAGAGTCCGAATTTAAAGC	2384
Db	2148	CTTTGATGAGCTATCCAAACGTATTTGTATCAAAAAATAGATGATGTGAAATTTAAAGC	2207
Qy	2385	TTATATCGCTACCAATTAAGAGGTTATATGAAGATGACGAAGTTTAGAATATATT	2444
Db	2208	CTATTAACGTTATCCATTTAAGAGGTTATATGAAAGATGTCAGACCTTAGAAATCTATTT	2267
Qy	2445	GATTCGTTATATATGCGAAACATGAAACATTTGATGTTCCAGTATCCAGTCCGATAGCC	2504
Db	2268	AATTCGCTATCAATGCAAAACGAAACGTAATATATACAGTACGGGTTCTTATGGCC	2327
Qy	2505	GCTTTCAGTTGAAAGCCCAATCGAAGGTCCGAGAACCGAATGATGATGCGACCAATTT	2564
Db	2328	GCTTTCAGTCCGAAAGTCCAAATTTGGAGAGTGTGGAAACCGAATCGGTGTGTCACACCT	2387
Qy	2565	TGAATGGAATCCTGTACTAGATTTGTTCTCGAGAGATGAGAAATAATGTGGCATCTATC	2624
Db	2388	TGAATGGAATCCTGTATTTAGATTTGTTCTCGAGAGACGGGAAATAATGTGCATCATCTC	2447
Qy	2625	CCATCATTTCTCTTGGATTTATGATATTTGATATGACACAGACTTGCATGAGAGATCTAGCGCT	2684
Db	2448	CCATCATTTCTCTTGGACATTTGATGTTGATGACACAGACTTGCAGAGAGATCTAGCGCT	2507
Qy	2685	GTGGGTGATTTCAAGATTAAAGCGCAGAAAGTCAATGCAAGACTAGGGAATCTGGAAT	2744
Db	2508	GTGGGTGATTTCAAGATTAAAGCGCAGAAAGTCAATGCAAGACTAGGGAATCTGGAAT	2567
Qy	2745	TATTTAAGAGAAACCATTTATTTAGAGAGCACTGTCTGTGTGAAGAGCAGAGAAAA	2804
Db	2568	TATTCMAAGAGAAACCATTTATTTAGAGAGCACTGTCTGTGTGAAGAGCAGAGAAAA	2627
Qy	2805	ATGAGAGACAAACGTGAAAACTACATTTGGAACAAACGAATATATACAGGGCGAA	2864
Db	2628	ATGAGAGACAAACGGGAAAACTACATTTGGAACAAACGAATATATACAGGGCGAA	2687
Qy	2865	AGAACTGTGATGCTTATTTATTTGTAGATCTCAATATATATGATTTACAGCGGATACAA	2924
Db	2688	AGAACTGTGATGCTTATTTATTTGTAGATCTCAATATATATGATTTACAGCGGATACAA	2747
Qy	2925	CATTGCAATGATTCATGCGCGAATTAACCTTGTTCATGCAATTCGAGAGCTTATCTGTC	2984
Db	2748	CATTGCAATGATTCATGCGCGAATGACCTTGTTCATCAGATTCACAGAGGCTTATCTTCC	2807
Qy	2985	AGAAATTAATCTGTATCCCGGGGTGTAATAATGCGGAAATTTTGAAGAAATTTAGAGGTCCAT	3044
Db	2808	AGAACTACCTTTCATTCAGGAATTAATATGTGTGATTTTGAAGAAATTTAGAAACCGAT	2867
Qy	3045	TATCACTGCAATCTCCCTATACGATGCGAGAAATGTGCTTAAATAATGTGATTTTAAATTA	3104
Db	2868	TTCTATCTGCAATTAATCCCTATATGATGCGAGAAATGTCAATTAATAATGCGATTTCAATTA	2927
Qy	3105	TGATTTAGCATGCTGGAATGTAAAAAGGCATGTAGAT--GTACACAGAGCCATCACCG	3161
Db	2928	TGGCTTATCACTGTGAAACGTGAAGGGCATGTATGATGTAGTATGAAACAAACACACCG	2987

QY 3162 TTCTGTCCTTGTATATCCAGAAATGGAGAGAGATGTCAACAGATTGGCTGTCTCC 3221  
 Db 2988 TTCCGTCCTTGTATATCCAGAAATGGAGAGAGATGTCAACAAATGTGTCTCTCC 3047  
 QY 3222 GGGGCGGTGTATATCTCCGTGTCAACAGGTACAAAGAGATGTGAGAGAGGTGTCT 3281  
 Db 3048 GGGGCGGTGTATATCTCCGTGTCAACAGGTACAAAGAGATGTGAGAGAGGTGTCT 3107  
 QY 3282 AACGATTCATGAATCGAGAAACAATACAGACGAATTAATTTAAATCTGTGAAGAGA 3341  
 Db 3108 AACATTCATGAATCGAGAAACAATACAGACGAATTAATTTAAATCTGTGAAGAGA 3167  
 QY 3342 GGAAGTGTATCCAAAGAGATACAGAACTGTATATATATATATATATATATATATAT 3401  
 Db 3168 GGAAGTGTATCCAAAGAGATACAGAACTGTATATATATATATATATATATATATATAT 3227  
 QY 3402 AG-----TATGTATATCTCCGTATATGTCTGTATATGAGATGTCAATGATGTGA 3449  
 Db 3228 AGGATCCAGATTCAGATTAATTCCTCGTATATCAAGATATGAGAGATGATATGAAATGA 3287  
 QY 3450 TACTACGATCTGTATATATCAAAACGACTTATGAGAGAAACGATACAGATGTACG 3509  
 Db 3288 TACTACGATCTGTATATATCAAAACGACTTATGAGAGAAACGATACAGATGTACG 3347  
 QY 3510 AAGATATATCATTTGTATATATGACAGAGGATATGTATATATATATATATATATATAT 3569  
 Db 3348 AGGATATATCATTTGTATATATGACAGAGGATATGTATATATATATATATATATATATAT 3407  
 QY 3570 TTATATGACAAAGAT 3629  
 Db 3408 TTATATGACAAAGAT 3467  
 QY 3630 AGAAGCGAAGGAATTTATATGTATGACAGCGTGAATTAATCTCTTATGAGAGAA 3684  
 Db 3468 AGAAGCGAAGGAATTTATATGTATGACAGCGTGAATTAATCTCTTATGAGAGAA 3522

RESULT 13  
 US-08-962-190-1  
 / Sequence 1, Application US/08962190  
 / Patent No. 5985267  
 / GENERAL INFORMATION:  
 / APPLICANT: Payne, Jewel M.  
 / APPLICANT: Sick, August J.  
 / TITLE OF INVENTION: No. 5985267el Bacillus thuringiensis Isolates  
 / TITLE OF INVENTION: Active Against Lepidopteran Pests  
 / NUMBER OF SEQUENCES: 27  
 / CORRESPONDENCE ADDRESS:  
 / ADDRESSEE: Saliwanchik & Saliwanchik  
 / STREET: 2421 N.W. 41st Street, Suite A-1  
 / CITY: Gainesville  
 / STATE: FL  
 / COUNTRY: US  
 / ZIP: 32606  
 / COMPUTER READABLE FORM:  
 / MEDIUM TYPE: Floppy disk  
 / COMPUTER: IBM PC compatible  
 / OPERATING SYSTEM: PC-DOS/MS-DOS  
 / SOFTWARE: PatentIn Release #1.0, Version #1.25  
 / CURRENT APPLICATION DATA:  
 / APPLICATION NUMBER: US/08/962,190  
 / FILING DATE:  
 / CLASSIFICATION: 424  
 / PRIOR APPLICATION DATA:  
 / APPLICATION NUMBER: US/08/291,368  
 / FILING DATE:  
 / APPLICATION NUMBER: 07/597,607  
 / FILING DATE: 15-OCT-90  
 / ATTORNEY/AGENT INFORMATION:  
 / NAME: Saliwanchik, David R.  
 / REGISTRATION NUMBER: 31,794  
 / REFERENCE/DOCKET NUMBER: MA50.C1

/ TELECOMMUNICATION INFORMATION:  
 / TELEPHONE: (904)375-8100  
 / TELEFAX: (904)372-5800  
 / INFORMATION FOR SEQ ID NO: 1:  
 / SEQUENCE CHARACTERISTICS:  
 / LENGTH: 3522 base pairs  
 / TYPE: nucleic acid  
 / STRANDEDNESS: double  
 / TOPOLOGY: linear  
 / MOLECULE TYPE: DNA (genomic)  
 / HYPOTHEICAL: NO  
 / ANTI-SENSE: NO  
 / ORIGINAL SOURCE:  
 / ORGANISM: Bacillus thuringiensis  
 / STRAIN: aizawai  
 / INDIVIDUAL ISOLATE: PS81A2  
 / IMMEDIATE SOURCE:  
 / LIBRARY: lambdaagem - 11 (tm) Library of August Sick  
 / CLONE: 81A2  
 / US-08-962-190-1

Query Match 48.6%; Score 1793.4; DB 2; Length 3522;  
 Best Local Similarity 71.9%; Pred. No. 0;  
 Matches 2497; Conservative 0; Mismatches 861; Indels 117; Gaps 7;

QY 228 ACAATAGCTAGTTTATATATATTTCTTGTGTGATATATAGCCCGCGGAGATCA 287  
 Db 147 ACTAGGAGATTTATATCTGTGCTGTGTATATATATAGGGGGCTATAGTCTTACCA 206  
 QY 288 GGGGGAATTTCTTGAACATGTGCAACACTTAATTAATCAAAATGCAAAATGC 347  
 Db 207 ATGGATATATTTTATGACCAATATGAGCTATATATGATGCGCAAGATATGAGAAATTCG 266  
 QY 348 TGAATATAGGCACTTGTCTGATTAACAAGTTTAGAGATTCCTTTAGAGCTTATACA 407  
 Db 267 TAGGATTCAGCAATTTCTAGATTAACAAGGCTTAAGCAATCTTACGAATTAACA 326  
 QY 408 GTCACTTGAAGTTGGCTTGAACACCGTATGATGCAAGACGAGAGTCTTATATAC 467  
 Db 327 TGTCTTTAAACCTGGAGATGATCTTATCAATCCAGATTAAGAGAGATGCGTAT 386  
 QY 468 CCAATATATAGCTTATGAACTTGTATATGAGATGCGCTTTCGCAATTAAGAA 527  
 Db 387 TCAATTAATGACATACAGATGCTCTTACACAGCTATATTCCTTTTCAATCAAG 446  
 QY 528 CCAAGATTCATTAATTAATGATATATATCTCAAGCTGCAAAATTAACCTATTAAT 587  
 Db 447 TATGAAATTCCTCTTTATCAATATATGATGATGCAAGCTGCAAAATTAATCGGTTT 506  
 QY 588 GAGAGATGCTCTCTTTTGTGATGAAATTTGGCTTAATGATGCAAGCAAAATCAAGTTA 647  
 Db 507 GAGAGATGTTTCAAGTTTGAACAGCTTGGGATTTGATGCAACAAATCAATGTCG 566  
 QY 648 TATATGAGCCCAAGTGAACAAACGAGATTAATTCGACTATGCGTAAATGATTA 707  
 Db 567 TATATATGATTAATCAAGCTTATTTGGCAATATATCTGATTAATGCTTGGATTA 626  
 QY 708 TACAGCTTAATATAGCTTGAAGGAGCAAAATGCGC--CAAGTTGGTGGCTTATATCA 764  
 Db 627 TACGGGTTAAATCGTTTACAGTATATAGAGGCGTATAGAGATATGCGCAAGATTAATAG 686  
 QY 765 ATTCGATGAGATCTAAGCTTATGAGGATTAATGATCTAGTGGCACTATTTCCCAAGCTATGA 824  
 Db 687 GTTATGAGAGGATTAACAATATCAATATATATATATATATATATATATATATATATAT 746  
 QY 825 CATGCACTTATCAATTAATACAGTCTGATTAACAAGGAGCTTATACAGACG 884  
 Db 747 TTCTATATTAATCCAAATTCGCAATCTATCAATTAACGCGGGAATATATCAATTC 806  
 QY 885 AATTGAGCAACAGGGGTAATATATGCAAGTATGAATGGTATTAATTAATATATATATATAT 944  
 Db 807 -----GGTAAATTAAT 842

Qy 945 GTTTCGGCTATAGAGCTGCGGTTATCCGAAGCCCGCATCTACTGATTTTCTAGACA 1004  
Db 843 TTTCGAGAGATAGAAAAATTCAGCTATTAGAAAGTCCCATCTTATGATTTCTTAAATTA 902  
Qy 1005 ACTTACAAATTTTAGCACTTCATCAGATGGAGTGTACTAGGACATATGACTTCTGCGC 1064  
Db 903 TATTAATTTATGACATGCAATTTA-----ATTAGAGCGCTTCACTATTTGGGC 947  
Qy 1065 GGGGCAACAATTCMAATCTGCGCAATAGAGCGGATTAATTAATCTTCAACGCAATGGGTC 1124  
Db 948 GGGGCAATCGTGAATCTTCATTTTACCGGAGTTCCGAGTGAATAGTCCCTCATATA 1007  
Qy 1125 TACCAATACTCTTATTAATCTGTAAATTAATCACTTCTCTCGAAGCATATTTGAC 1184  
Db 1008 CCGGATTAATCTGCAACCGAAGCCGATCGAATATGCTCTAGCACTTTTCCAGGTCCT 1067  
Qy 1185 TGAATCATATGACGAGTGTCTATGCGGGAATTTACCTTGAACCTATTCATGCTGCTCC 1244  
Db 1068 TAACTATTTTATTAAGAACATATCAACCTTTCTTCGAAGATCCGATTAATTAATGCC 1127  
Qy 1245 TACTGTTAGATTTAATTTTAGGAACCTCAGAAATCTTTGAAAGAGTACTGCTAACTA 1304  
Db 1128 AACATTAGAAATTAATGATAGTGCAGGGGTAGAGATTCATTCACCAATTAATGCTGAAGT 1187  
Qy 1305 TACTCAACCTATGAGTCACTGCGCTTCAATTAATAAGATTAGAAATCTGAATTAACAAC 1364  
Db 1188 TCTATATAGAAAGAGAGAACAGTAGATCTCTGATGAGTGGCAATTTGA-----CGG 1241  
Qy 1365 AGAAACAAGAAAGCAACAAATTAATGAATCATATAGCATAGGTTATCTCAATAGGCT 1424  
Db 1242 TGAAGATTTCAATGTTGATAGTCAATAGATTAAGTACGTTACATTAACCAAGTCTGT 1301  
Qy 1425 CATTTCACAATCTAGGGTGCATGACATGATATTTCTTGGACGCAACCGATGACAGATCG 1484  
Db 1302 ATATATATCAATATATATCTAGCTTGCACATTTGTTGGACATCAAGTGTACTGA 1361  
Qy 1485 TACAATACCAATTAATGATGACATGACATCACAATTAATCAATGTTAAATCAATCACT 1544  
Db 1362 TCCAAATATATATCTATCCGATGTAATTAACAATATCAATGGTAAATCAATCTCCCT 1421  
Qy 1545 TAATTCAGTACCTGTAGTCACTGAGTGGCCAGAGTTTACAGAGAGGGAATTAATCCGAAC 1604  
Db 1422 TACTTCAGGATCCTGTAGTCAAGAGCCCAAGATTTACAGAGAGGGAATTAATCCGAAC 1481  
Qy 1605 TAAAGTTAATGATGATGATCAATGATAGGCTTAAATTTAATTAATCAATCAATCAAGCG 1664  
Db 1482 TAAAGTTAATGATGATGATCAATGATAGGCTTAAATTTAATTAATCAATCAATCAAGCG 1541  
Qy 1665 GATTCGCGTGAAGTTCGTTATGCTGCTTCAAAACAATGCTCTGAAGGTTAACTGTCCG 1724  
Db 1542 GATTCGCGTGAAGTTCGTTATGCTGCTTCAAAACAATGCTCTGAAGGTTAAATGTTGG 1601  
Qy 1725 AGGAGTATCACTTTTATGATCAAGATTCCTTATGATCAATGATGATCAATGATGATGATGAT 1784  
Db 1602 AGGAGTATCACTTTTATGATCAAGATTCCTTATGATCAATGATGATCAATGATGATGATGAT 1661  
Qy 1785 ATCTCAATCACTTTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1844  
Db 1662 ATCTCAATCACTTTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1721  
Qy 1845 TGTGTGAATAGTATAGTATAGTATAGTATAGTATAGTATAGTATAGTATAGTATAGTATAG 1904  
Db 1722 TGTGTGAATAGTATAGTATAGTATAGTATAGTATAGTATAGTATAGTATAGTATAGTATAG 1781  
Qy 1905 ATTCATTTCCAAATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1964  
Db 1782 ATTCATTTCCAAATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1841  
Qy 1965 GGTGAATGCTCTGTTTACTAATAGATGATGATGATGATGATGATGATGATGATGATGATGAT 2024  
Db 1842 GGTGAATGCTCTGTTTACTAATAGATGATGATGATGATGATGATGATGATGATGATGATGAT 1901  
Qy 2025 TCATATGATCAAGTATCAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2084

Db 1902 TCATATGATCAAGTATCAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1961  
Qy 2085 AAAGAGAAATTAATCTTGAAGAAAGTAAATAGCAAAAGCACTGATGATGATGATGATGATGAT 2144  
Db 1962 AAAGAGAAATTAATCTTGAAGAAAGTAAATAGCAAAAGCACTGATGATGATGATGATGATGAT 2021  
Qy 2145 ACTCAAGATCCAAATCTTCAATCTCAATCAATCAATCAATCAATCAATCAATCAATCAATCAAT 2204  
Db 2022 ACTCAAGATCCAAATCTTCAATCTTCAATCAATCAATCAATCAATCAATCAATCAATCAATCAAT 2064  
Qy 2205 GCAATCAATTTCAATCTTCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAAT 2264  
Db 2065 -----CGTGGCTGAGAGAGAGTACGGA 2087  
Qy 2265 CATTAATTCAGAGAAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2324  
Db 2088 TATTTCAATCCAGAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2147  
Qy 2325 TTTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2384  
Db 2148 CTTTGAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2207  
Qy 2385 TTTATCTGCTCAATTAAGAGGATTAATGATGATGATGATGATGATGATGATGATGATGATGAT 2444  
Db 2208 CTATTAACCTGTTACCAATTAAGAGGATTAATGATGATGATGATGATGATGATGATGATGATGAT 2267  
Qy 2445 GATTCGTTATTAAGCAAAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2504  
Db 2268 AATTCGTTATTAAGCAAAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2327  
Qy 2505 GCTTTCAGTTGAAAGCCCAATCGAAGGTGCGAGAACCGAATCGATGCGACCACTTT 2564  
Db 2328 GCTTTCAGTTGAAAGCCCAATCGAAGGTGCGAGAACCGAATCGATGCGACCACTTT 2387  
Qy 2565 TGAATGAATCTGATCTAATGTTCTCTGAGATGATGATGATGATGATGATGATGATGATGATGAT 2624  
Db 2388 TGAATGAATCTGATCTAATGTTCTCTGAGATGATGATGATGATGATGATGATGATGATGATGAT 2447  
Qy 2625 CCAATCTTCTCTTGGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2684  
Db 2448 CCAATCTTCTCTTGGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2507  
Qy 2685 GTGGGTGATTAATCAAGTTAAGACGACAGAGGTCAATCAAGTCAATCAAGTCAATCAAGTCAAT 2744  
Db 2508 GTGGGTGATTAATCAAGTTAAGACGACAGAGGTCAATCAAGTCAATCAAGTCAATCAAGTCAAT 2567  
Qy 2745 TATTAAGAGAAACCAATTAATTAAGAGACATGTTCTGTGTGAAGAGACAGAGAGAA 2804  
Db 2568 TATTAAGAGAAACCAATTAATTAAGAGACATGTTCTGTGTGAAGAGACAGAGAGAA 2627  
Qy 2805 ATGAGAGAGAAACCAATTAATTAAGAGACATGTTCTGTGTGAAGAGACAGAGAGAA 2864  
Db 2628 ATGAGAGAGAAACCAATTAATTAAGAGACATGTTCTGTGTGAAGAGACAGAGAGAA 2687  
Qy 2865 AGAAGCTGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2924  
Db 2688 AGAAGCTGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2747  
Qy 2925 CATTCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2984  
Db 2748 CATTCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2807  
Qy 2985 AGAATTAATCTGATTAATCCCGGTGATTAATGCGGAAATTTTGAAGAAATTAAGAGTCCCAT 3044  
Db 2808 AGAATTAATCTGATTAATCCCGGTGATTAATGCGGAAATTTTGAAGAAATTAAGAGTCCCAT 2867  
Qy 3045 TATCACTGCAATCTCCCTATATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3104  
Db 2868 TATCACTGCAATCTCCCTATATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2927  
Qy 3105 TGAATTAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3161

Db	2928	TGGCTATCATGCTGGAACGTGAAGGCGCATGTGAGATTAGTAGAACAAACAAACACCG	2987
Qy	3162	TTCTGTCTCTTGTATTCAGAAATGGGAAGCGAAGTGTCAACAAGCATTTCCGCTCTGTCC	3221
Db	2988	TTTCGATCTTGTGTGTCCCGGAATGGGAAGCAAGTGTGCAAACTTCGTCTGTCC	3047
Qy	3222	GGGGGCTGCTATATCTCCGCTGCACAGCGTACAAAGAGGATATGGAGAGGGTGTGT	3281
Db	3048	GGGGGCTGCTATATCTTCGCTGTTCACGCGTCAAAAGAGGATATGGAGAGGGTGTGT	3107
Qy	3282	AACGATCCATGAAATCGAGAACATATACAGAGAACTAAATTTTAAAACTGTGAAGAGA	3341
Db	3108	AACATTCATGATGAGATCGAGAACATATACAGAGAACTAAATTTTAAAACTGTGAAGAGA	3167
Qy	3342	GGAAAGTATTCGAACGGATACAGGAACGTGTATGATATATCTGCACACCAAGSTACAGC	3401
Db	3168	GGAAGTGTATCCAAACGGATACAGGAACGTGTATGATATATCTGCACACCAAGSTACAGC	3227
Qy	3402	AG-----TATGTAAATTCOCGTAATGCTCGAGATATGAGATGATATGAAAGTTGA	3449
Db	3228	AGGATCCACAGATTCATGTAAATTTCCCGTAATATCAGATATAGATGATATGAAATGAA	3287
Qy	3450	TACTACAGCATCTGTGTAATTAACAACGACATTATGAGAAAGAAAAGTATACAGATGTACG	3509
Db	3288	TACTACAGCATCTGTGTAATTAACAACGACATTATGAGAAAGAAAGTATACAGATGTACG	3347
Qy	3510	AAGAGATTAATCATTTGTGAATATGACAGAGGGTATGTGAATTAATCAACAATAACGACTGG	3569
Db	3348	AGGAGATTAATCATTTGTGAATATGACAGAGGGTATGTGAATTAATCAACAATAACGACTGG	3407
Qy	3570	TTATATATCAAAAAGAAATTAGAAATCTTCCAGAAAACGATAAAGTATGGAATTGAGATTGG	3629
Db	3408	TTATATATCAAAAAGAAATTAGAAATCTTCCAGAAAACGATAAAGTATGGAATTGAGATTGG	3467
Qy	3630	AGAAACGGAAGGAAGTTATTTGTAAGACAGGTGGAATTAATCTCCTTATGAGAGGAA	3684
Db	3468	AGAAACGGAAGGAAGTTATTTGTAAGACAGGTGGAATTAATCTCCTTATGAGAGGAA	3522

RESULT 14  
 PCT-US95-10310-1  
 Sequence 1, Application PC/TUS9510310  
 GENERAL INFORMATION:  
 APPLICANT: MYCOGEN CORPORATION  
 APPLICANT: STREET ADDRESS: 5501 Oberlin Drive  
 APPLICANT: CITY: San Diego  
 APPLICANT: STATE/PROVINCE: California  
 APPLICANT: COUNTRY: US  
 APPLICANT: POSTAL CODE/ZIP: 92121  
 APPLICANT: PHONE NUMBER: (619) 453-8030  
 APPLICANT: FAX NUMBER: (619) 453-6991  
 TITLE OF INVENTION: Protein Toxins Active Against Lepidopteran Pests  
 NUMBER OF SEQUENCES: 27  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: Saliwanchik & Saliwanchik  
 STREET: 2421 N.W. 41st Street, Suite A-1  
 CITY: Gainesville  
 STATE: FL  
 COUNTRY: US  
 ZIP: 32606  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: PatentIn Release #1.0, Version #1.25  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: PCT/US95/10310  
 FILING DATE:  
 CLASSIFICATION:  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: 07/597,607  
 FILING DATE: 15-OCT-90  
 CLASSIFICATION:

```

1  ATTORNEY/AGENT INFORMATION:
2  NAME: Saliwanchik, David R.
3  REGISTRATION NUMBER: 31,794
4  REFERENCE/DOCKET NUMBER: MA50. C1
5  TELECOMMUNICATION INFORMATION:
6  TELEPHONE: (904) 375-8100
7  TELEFAX: (904) 372-5800
8  INFORMATION FOR SEQ ID NO: 1:
9  SEQUENCE CHARACTERISTICS:
10     LENGTH: 3522 base pairs
11     TYPE: nucleic acid
12     STRANDEDNESS: double
13     TOPOLOGY: linear
14     MOLECULE TYPE: DNA (genomic)
15     HYPOTHEetical: NO
16     ANTI-SENSE: NO
17     ORIGINAL SOURCE:
18     ORGANISM: Bacillus thuringiensis
19     STRAIN: aizawai
20     INDIVIDUAL ISOLATE: PS81A2
21     IMMEDIATE SOURCE:
22     LIBRARY: Lambdagem - 11 (cm) Library of August Sick
23     CLONE: 81A2
24
25  CDT-US95-10310-1

```

Query Match	48.6%;	Score 1793.4;	DB 5;	Length 3522;
Best Local Similarity	71.9%;	Pred. No. 0;		
Matches 2497;	Conservative	0;	Mismatches 861;	Indels 117; Gaps 7

QY	228	ACAAATAGCTAAGTTTTATAGTTTTCTTGTGTGTAATTAATGCCCCGCGCAGAGATCA	287
DB	147	ACTAGGGGAATTTTTATCTGGCTGTTTGGATGATTAATGGGGGCTATAGGTCCTTCA	206
QY	288	GTGGAAATTTTCTAGAACATGTGCAACAATTAAATCAACAAATATACAGAAATATGC	347
DB	207	ATGGGATATATTTTAAAGCAAATTAGCTATTTGATCGCCAAAGATATAGGAATTC	266
QY	348	TAGAAATACGCCACTTCTCGATTACAAGTTTAGAATTCCTTTAGAGCTATCAACA	407
DB	267	TAGAAATACGCCAATTTCTAGATTACAAGGCTAAGCAATCTTTACGAATTAACAAA	326
QY	408	GTCACTTGAAGATTGGCTACAAAACCGTATGATGCGAAGACGAAAGTGTCTTATAC	467
DB	327	TGCTTTTAAAACTGGGAAGTAGATCCATCAATACAGATTAAAGAGAAGATGCGAT	386
QY	468	CCAATATATAGCCTTAGAATTGATTTTCTAATGCGATGCGGCTTTCGCAATTAGAA	527
DB	387	TCAATTTATAGATGAACAGTGCTCTTACAACAGCTATTCCTCTTTTTCAGTTCAAG	446
QY	528	CCAAAGATTCATATTATTAATGATATGCTCAAGCTGCAATTTTACACTATTATTT	587
DB	447	TTATGAATTCCTCTTTTATCAGATATGTTCAAGCTGCAATTTTACATTTATCGTTTT	506
QY	588	GAGAGATGCTCTCTTTTGGTAGTGAATTTGGGCTTACATCGCAGAAATTCACGTTA	647
DB	507	GAGAGATGCTTCACTGTTTGGACAACGTTGGGATTTGATGTACCAACATCAATATGTCG	566
QY	648	TTATAGCGCGCAAGTGAACAACAGAGATTATTCGACTATTCGTTAGATGTGATTA	707
DB	567	TTATATATGATTTAATCTAGGCTTATTTGGCGAATATACGATTTATGCTATGCTGTATA	626
QY	708	TACAGCTCTAAATAGCTTGAAGGAGCAAAATGCGG---CAAGTTGGGCGCTTATATCA	764
DB	627	TACGGGCTTAATGCTTTACACGTAATGAAGGGGTACAGGATGGCGAAGTTTAAATAG	686
QY	765	ATTCCGTAGAGATCTAACGTTAGGGGATTAAGATCTAGTGGCACTATTTCCAGCTATGA	824
DB	687	GTTTAGAAGAGATTAAACAATATCAGATATGATATTAATTTCTTTTCCAAAATTAAGA	746
QY	825	CACTCGCACTTATCCAAATTAATACAGATGCTCACTTAAACAAGGAAGTTTATACAGACG	884
DB	747	TTTCAGATTTATCCAAATTCGCAAAATCTATCAATTAACGCGGGAAGTATATACGATTC	806



QY 885 AATTGAGCAACAGGGGTAATATGCAAGTATGATTTGGTATTAATATATGCACTTC 944  
DB 807 -----GGTAAATTAATATACTGATTTATGAGTTACCCAG 842  
QY 945 GTTTTCCGATATAGAGCTGGGGTTATCCGAGCCCGCATCTACTGATTTTCTAGACA 1004  
DB 843 TTTTGAGAGTATTCGAAATTCAGCTTATAGAGTCCCACTTTATGATTTCTTAAATTA 902  
QY 1005 ACTTACAATTTTATGACATTCATGACGATGAGTCTACTAGGATATGACTTACGGCG 1064  
DB 903 TATATATATGACATGATTTA-----ATTAGAGCGGTCTCATTTGGGC 947  
QY 1065 GGGGCAACAACTTCAATCTGCGCCAAATAGAGCGGATTAATATCTTCAACGACATGGGTC 1124  
DB 948 GGGGCACTGCTGTACTTCTCAATTTTACCGGATGTTCCAGATGATTAAGTCCCTCATATA 1007  
QY 1125 TACCAATACCTTCTATTAATCCGTAAAGATTATCATCTTCTCTGAGACGATATTTGAC 1184  
DB 1008 CCGGATTAATGCAACGACGAGTCCGAACTATGCTCTTAGCACTTTCCAGGCTCT 1067  
QY 1185 TGAATCATATGCAAGAGTCTTCTATGCGGAAATTTACCTTGAACCTTATGATGCTGCC 1244  
DB 1068 TAATCTATTTTATAGAACATCATGACCCCTTCTCCGAAGATCCGATATATTTATGCC 1127  
QY 1245 TACTGTTAGTTTATTTTATAGAAACCTCAGAAATATCTTTGAAAGAGTACTGTAATA 1304  
DB 1128 AATATTAGGATTAATTTAGTGACGGGGTATGATTCATCAACCAATTAATGCTGAAGT 1187  
QY 1305 TACTCAACCTTATGAGTCACTGGGCTTCAATTAAGATTGAGAACTGAATTAACACC 1364  
DB 1188 TCTATATAGAGAGAGAGAAACAGATTTCTCTTGATGAGTGGCAATTA-----CGG 1241  
QY 1365 AGAAACAAACAGAAACGAAATTAATGATCATATAGTCAATAGTTATCTGACATAGGCT 1424  
DB 1242 TGAATATCTTATGTTGATATAGTCAATAGTTAGTCAAGTTACATTAACAGTGGCTT 1301  
QY 1425 CATTTCAACAATCTAGGGTGCATGTACAGATATTTCTTGAACGACCGATAGTCAGATCG 1484  
DB 1302 ATATTAATCTAATATACTAGCTTGCACATTTGTTTGGACATCATCAGTGTACTGA 1361  
QY 1485 TACAATATACATTAATGTTCAATATAGCATATACAAATATCCATTTGTAATATCACT 1544  
DB 1362 TCGAAATATATCTATCCGATGTAATTAACAATAACATTTGTAATATCACTTCTCCCT 1421  
QY 1545 TAAATTCAGTACCTCTGATGCTAGTGCAGGATTTTACAGAGAGGATTAATCCGAC 1604  
DB 1422 TACTTACAGTACCTCTGATGCTAGTGCAGGATTTTACAGAGAGGATTAATCCGAC 1481  
QY 1605 TAACTTAATGATGATGATTAATGATGATGATTTTATTAATATATCATCATTTACAGCG 1664  
DB 1482 TAACTTAATGATGATGATTAATGATGATGATTTTATTAATATATCATCATTTACAGCG 1541  
QY 1665 GTATCCGCTGAGAGTCTGATATGCTGTTCTCAACCAATGCTCTGAGGTTAACTGTCGG 1724  
DB 1542 GTATCCGCTGAGAGTCTGATATGCTGTTCTCAACCAATGCTCTGAGGTTAAATGTTGG 1601  
QY 1725 AGGAGTACTACTTTTGAATCAAGATTTCCCTAGTACTATGATGCAAAATGATCTTTGAC 1784  
DB 1602 AGGAGTACTACTTTTGAATCAAGATTTCCCTAGTACTATGATGCAAAATGATCTTTGAC 1661  
QY 1785 ATCTCATATCTTATGATTTGACAAATTTCCGTAGATTAATGATGATCTGGCAGTCAAC 1844  
DB 1662 ATCTCATATCTTATGATTTGACAAATTTCCGTAGATTAATGATGATCTGGCAGTCAAC 1721  
QY 1845 TGGTGAATATAGTATAGTAAATAGAGATGACAAACGTTTCACTTTGATTAATTTGA 1904  
DB 1722 TGGTGAATATAGTATAGTAAATAGAGATGACAAACGTTTCACTTTGATTAATTTGA 1781  
QY 1905 ATTCAATTCATTAATGCAACCTTGCAGAGAGATATGATTTTGAAGAGGCGCAGAGGCG 1964  
DB 1782 ATTCAATTCATTAATGCAACCTTGCAGAGAGATATGATTTTGAAGAGGCGCAGAGGCG 1841  
QY 1965 GGTGAATGCTCTGTTTATCTAATAGATTCAGAGAGATGAGAAACAGATGTGACAGATTA 2024

DB 1842 GGTGAATGCTCTGTTTATCTTCCATCAATTCAGATTAATAACAGATGACAGATTA 1901  
QY 2025 TCAATATGATCAAGTATTCATATTTAGTGGCGTGTATTCGAGATGAATTTCTAGATGA 2084  
DB 1902 TCAATATGATCAAGTATTCATATTTAGTGGCGTGTATTCGAGATGAATTTCTAGATGA 1961  
QY 2085 AAGAGAGAAATTAATGAGAAAGTGAATAATGCGAAACGATCAGTATGAGAAAGAACTT 2144  
DB 1962 AAGAGAGAAATTAATGAGAAAGTGAATAATGCGAAACGATCAGTATGAGAGAAATTT 2021  
QY 2145 ACTTCAAGATTCGAATCTTCAATTCATCAATTAAGCAACGAGCTTCAATTTCTAATGA 2204  
DB 2022 ACTTCAAGATTCGAATCTTCAAGAGGATCAATAGCAACGAGC----- 2064  
QY 2205 GCAATGAAATTTGACATCTATCAATGAACATCGAATGATGATGAGGAGATGAGAA 2264  
DB 2065 -----GTTGGCTGAGAGAGATTTACGGA 2087  
QY 2265 CATTAATCAAGAGAGAGAAATGACGTATTTAAAGAAATTAACCTCAACTACCGGAGAC 2324  
DB 2088 TATTAATCAATCAAGAGAGAGATGACGTATTTAAAGAAATTAACCTCAACTACCGGATC 2147  
QY 2325 TTTTATGATGCTTATTCGACGTTATTTATATCAAAAATAGAGAGTCCGAAATTTAAAGC 2384  
DB 2148 CTYTGAATGATGCTATTCGAATTTGATCAAAAATATGATGATGCAAAATTTAAAGC 2207  
QY 2385 TTAATCTGCTACCAATTAAGAGGTTATTTGAATGATGATGATTTAGATTAATTAATTT 2444  
DB 2208 CTATTAACCTGCTACCAATTAAGAGGTTATTTGAATGATGATGATTTAGATTAATTAATTT 2287  
QY 2445 GATTCGTTATTAATGCGAAACATGAAACATTTGATGATGATGATGATGATGATGATGATG 2504  
DB 2268 AATTCGCTAATAGAGAAACACGAAACATTAATGATGATGATGATGATGATGATGATGATG 2327  
QY 2505 GCTTTAGTGAAGACCAATTCGAGAGTCCGAGAAACCAATTCGATGATGATGATGATGATG 2564  
DB 2328 GCTTTCAGTGAAGATTCGAATGAGAGTGGAGAAACCAATTCGATGATGATGATGATGATG 2387  
QY 2565 TGAATGAAATCCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 2624  
DB 2388 TGAATGAAATCCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 2447  
QY 2625 CCATCATTTCTCTTGGATTTGATATTTGATGATGATGATGATGATGATGATGATGATGATG 2684  
DB 2448 CCATCATTTCTCTTGGATTTGATATTTGATGATGATGATGATGATGATGATGATGATGATG 2587  
QY 2685 GTGGGTGATTCAGATTTAAGACGAGAAAGTCAATGAGAACTAGGAAATCTGAATTT 2744  
DB 2508 GTGGGTGATTCAGATTTAAGACGAGAAAGTCAATGAGAACTAGGAAATCTGAATTT 2567  
QY 2745 TATTTGAAGAAACCATTAATTTAGAGAGACATGCTCTGCTGTAAGAGAGACAGAGAA 2804  
DB 2568 TATTCGAAGAAACCATTAATTTAGAGAGACATGCTCTGCTGTAAGAGAGACAGAGAA 2627  
QY 2805 ATGAGAGACAAACGTAAGAAACCTAACATTTGAGAAACAAACGATATATCAAGAGGCAA 2864  
DB 2628 ATGAGAGACAAACGTAAGAAACCTAACATTTGAGAAACAAACGATATATCAAGAGGCAA 2687  
QY 2865 AGAAGCTGAGATGCTTATTTGATGATTTCTCAATATATATATATATATATATATATATAT 2924  
DB 2688 AGAAGCTGAGATGCTTATTTGATGATTTCTCAATATATATATATATATATATATATATAT 2747  
QY 2925 CATTTGCAATATTCATCCGCGCAATTAACCTTTGATCAATTCGAGAGGCTTATCTGTC 2984  
DB 2748 CATTTGCAATATTCATCCGCGCAATTAACCTTTGATCAATTCGAGAGGCTTATCTGTC 2807  
QY 2985 AGAATTAATCTGTTATCCCGGCTTAATATGCGGAAATTTTGAAGAAATTAAGAGTGCAT 3044  
DB 2808 AGAATTAATCTGTTATCCCGGCTTAATATGCGGAAATTTTGAAGAAATTAAGAGTGCAT 2867  
QY 3045 TATCACTGCAATCTCCCTATATGATGAGAGAAATGCTGTTAAAGATGATTTTAAATA 3104

Db 2868 TTCTACTGCATTTATCCCTATATGATGCGAAGAAATGTCATTAAAAATGCGATTTCANTAA 2927  
Qy 3105 TGGATTAGCATGCTGGAATGTAAGGCGATGTAGAT---GTAACAAGCCATCAACCG 3161  
Db 2928 TGGCTTATCATGCTGGAAAGCGATGTAGATGTAGAAACAACAACCG 2987  
Qy 3162 TTCTGTCCTTGTATCCCAAGATGGGAAGCAAGTGTCAACAGCTTGGCGTGTCC 3221  
Db 2988 TTGGGTCCTTGTGTCCCGGAATGGGAAGCAAGTGTCAACAATTCGTGTGTCC 3047  
Qy 3222 GGGGCGTGCTATATCCCTGCTGACAGCGGTCAAAAGAGGATATGAGAGGGTGTGT 3281  
Db 3048 GGGGCGTGCTATATCCCTGCTGACAGCGGTCAAAAGAGGATATGAGAGGGTGTGT 3107  
Qy 3282 AACGATCCATGAATAAGCAATACAGACGAATTAATAATTTAAAACTGTGAAGAGA 3341  
Db 3108 AACCATCATGAGATGGAAGAACATACAGACGAATTAATAATTTAAAACTGTGAAGAGA 3167  
Qy 3342 GGAAGTGTATCCAAAGGATCAGAGACGTGTATGATTATCTGCACACCAAGTACAGC 3401  
Db 3168 GGAAGTGTATCCAAAGGATCAGAGACGTGTATGATTATCTGCACACCAAGTACAGC 3427  
Qy 3402 AG-----TATGTAATCCCGTAAATGCTGATATGAGAGTGCATATGAGTTGA 3449  
Db 3228 AGGATCCAGATTCATGTATATCCGTAATATCATGATATGAGAGTGCATATGAGTTGA 3287  
Qy 3450 TACTACGATCTGTATTAATACCAACCGATTAAGAAAGAAACGTATACAGATGACG 3509  
Db 3288 TACTACGATCTGTATTAATACCAACCGATTAAGAAAGAAACGTATACAGATGACG 3347  
Qy 3510 AAGAGATATCATTTGTAATATGACAGAGGATATGTAATATTCACCACTACCAAGTGG 3569  
Db 3348 AGGAGATATCATTTGTAATATGACAGAGGATATGTAATATTCACCACTACCAAGTGG 3407  
Qy 3570 TTATATGACAAAGAAATTAAGTAATCTCCAGAAACCGATATGATGATGATGG 3629  
Db 3408 TTATATGACAAAGAAATTAAGTAATCTCCAGAAACCGATATGATGATGATGG 3467  
Qy 3630 AGAAACGGAAGGAAGTTATTTGTAAGCAGCGTGAATTACTCTTAATGAGAGA 3684  
Db 3468 AGAAACGGAAGGAAGTTATTTGTAAGCAGCGTGAATTACTCTTAATGAGAGA 3522

RESULT 15  
5164180-3  
; Patent No.: 5164180  
; APPLICANT: Payne, Jewel; Sick, August J.  
; TITLE OF INVENTION: BACILLUS THURINGIENSIS ISOLATES ACTIVE  
; AGAINST LEPIDOPTERAN PESTS  
; NUMBER OF SEQUENCES: 6  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/07/451,389  
; FILING DATE: 14-DEC-1989  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 353,860  
; FILING DATE: 18-MAY-1989  
; SEQ ID NO:3:  
; LENGTH: 3522  
5164180-3

Query Match 48.6%; Score 1791.8; DB 6; Length 3522;  
Best Local Similarity 71.8%; Pred. No. 0;  
Matches 2496; Conservative 0; Mismatches 862; Indels 117; Gaps 7;

Qy 228 ACAAAATGCTAGTTTATATGTTTCTGTGTGGAATTATGCGCGCGCGAGAGATCA 287  
Db 147 ACTAGGGGAATTTATCTTGTGCTGTGTAATATGAGGAGCTATAGGTCCTTCA 206  
Qy 288 GTGGGAATTTTCTAGAACATGCGAAACATTAATCAACAATAACAGAAATGC 347  
Db 207 ATGGGAATATTTTATAGAGAAATGAGCTATTCATGCGCCAAAGATAGAGAAATTCGC 266  
Qy 348 TAGGAATAGCGCACTTGCTGATTAACAAGGTTTATGAGAAATTCCTTAAGCCTATCAACA 407

Db 267 TAGGAATAGCGCACTTGCTGATTAACAAGGTTTATGAGAAATTCCTTAAGCCTATCAACA 326  
Qy 408 GTCACTTGAAGAATGGCTAGAAAACCGTATGATGACAGAAAGAGATGCTTTATAC 467  
Db 327 TGGCTTTAAAACTGGGAAGTATGATCTTACTATATCAGCAATTAAGGAAGATGCGTAT 386  
Qy 468 CCAATATATAGCTTATGAACCTGATTTCTTATATGAGATGCGCGCTTTGGCAATTGAAA 527  
Db 387 TCAATTTAATGACATGAACAGTCTCTTCAACAGCTATATCCCTTTTCACTTCAAG 446  
Qy 528 CCAAGAGTTCAATTAATATGATATGCTCAAGCTGCAAAATTTACCTATTAATTA 587  
Db 447 TTATGAATTCCTCTTTATCAGATATATGTTCAAGCTGCAAAATTTATCAATTCGCTTT 506  
Qy 588 GAGAGATGCTCTCTTTTGTGATGTAATTTGGGCTTACATGCGAGAAATTCACGTTA 647  
Db 507 GAGAGATGTTTCAAGTGTGGAACAAGTGGGATTTGATGTAACAACATCAATATGTCG 566  
Qy 648 TTATGAGCGCCAAAGTGAACAAACGAGATTAATTCGACTATTTGGCTAGATGATTA 707  
Db 567 TTATATGATTTTAATAGGCTTAATGGCCAAATATACGTATATGCTGTACGTTGATTA 626  
Qy 708 TACAGCTTAATATAGTTGAGAGGGAACAATGCG---CAAGTTGGGTGGTTATATCA 764  
Db 627 TACGGGTTAATCGTTTACACGTATAGAGGGGTAAGAGATGGCAAGATTTAATAG 686  
Qy 765 ATTCCTAGAGATCTAATCGTTAGGGATTAATGATCTAGTGGCACTATTCACAGCTATGA 824  
Db 687 GTTTAGAAAGATTAACAATATCAGTATTAATATATTTCTTTTCCAAATATACGA 746  
Qy 825 CACTGCACTTATCCAAATTAATCGAGTCTGATTAACAAGGAAGTTATACAGACG 884  
Db 747 TTCTATATTAATCCAAATTCGCAATCTATCAATTAAGCGGGAAGTATATCAATCC 806  
Qy 885 AATGGAAGCAACGGGTAATATGCAAGTATGATGATGATTAATATATGACCTTC 944  
Db 807 -----GATTAATTAATATACGATTAATAGATTACCCCAAG 842  
Qy 945 GTTTCCGCTATAGAGACTGCGGTTATCCGAAGCCCGCATCTAATTTCTAGAAC 1004  
Db 843 TTTGAGAGTATGAAABAATTCAGCTATTAAGAGTCCCACTTATGGAATTTCTTAATA 902  
Qy 1005 ACTTACAAATTTTATGACATTCATCAGATGAGTGTCTATGCAATATGACTTACCTGCG 1064  
Db 903 TATAATATATGACATGATTTA-----ATTAGGCGCTTCACTATTTGGCG 947  
Qy 1065 GGGGCAACAAATTCATCTCGGCAATAGAGCGGATTAATAATCTCAACGATGGGTC 1124  
Db 948 GGGGCACTGCTATCTTCATATTTTACCGGTATGCGAAGTATAGCTCCCTCAATA 1007  
Qy 1125 TACCAATATCTTATTAATCTGTAAGATTAATCATTTCTCTCGAGAGCTATATTTGAC 1184  
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Qy 1185 TGAATCATATGACAGAGTCTCTATGAGGAATTAACCTTGAACCTATATCTGTGCTCC 1244  
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Qy 1245 TACTGTTAATTAATTTATAGAACCTCGAATACTTTTGAAGAGGTATGCTAATCA 1304  
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Qy 1305 TAGTCAACCTTATGATCACTGCGCTTCAATTAAGAATTCAGAAATGCAATTAACACC 1364  
Db 1188 TCTATATAGAGAGAGAGAACATATATCTCTGATGAGTGTCCAAATGA-----CGG 1241  
Qy 1365 AGAAACAACGAACGAACAATTAATGATATATGATCAATAGGTTATCTCAATAGGGCT 1424  
Db 1242 TGAATATCATTAATGATATGATATGATTAATGATCACTTAACCTTAACCGAGTGTG 1301  
Qy 1425 CATTTACAAATCTAGGTCATATGATATATTTCTTGAAGCCATGATGTCAGATCG 1484

D	1302	ATATATACTAATATATACCTAGCTTCCCAACATTTGTTGGACACATCAAGCTACTGTA	1361
Q	1485	TACAAATACATTAAGTTCAGATAGCATTAACAACAAATACCATTTGGTAAATCATCAACCT	1544
D	1362	TCGAATATATATATCTATCCGGATGTAAATTACCAATATACCATTTGGTAAATCATCTCCCT	1421
Q	1545	TAAATTCAGGTACCTCTGTATAGTCAGTGGCCCAAGATTACAGAGGGGATATATATCCGAC	1604
D	1422	TACTTCAGGTACCTCTGTATAGTCAGAGGCCCAAGATTACAGAGGGGATATATATCCGAC	1481
Q	1605	TAACTTAATGGTAGTGTACTAAGATAGGGGCTTAATTTTAATATATACATATTAACAGC	1664
D	1482	TAACTTAATGGTAGTGTACTAAGATAGGGGCTTAATTTTAATATATACATATTAACAGC	1541
Q	1665	GTATCCGCTGAGAGTTCGTATAGTCTCTTCAAACAATGGTCTGAGGGTAACTGTGG	1724
D	1542	GTATCCGCTGAGAGTTCGTATAGTCTCTTCAAACAATGGTCTGAGGGTAACTGTGG	1601
Q	1725	AGGAGTACTACTTTTGTATCAAGATTCCTTATGTAATGATGCAATGAGTCTTTGAC	1784
D	1602	AGGAGTACTACTTTTGTATCAAGATTCCTTATGTAATGATGCAATGAGTCTTTGAC	1661
Q	1785	ATCTCAATCATTTGATTTGACAAATTTCCGTATGTAATGATGCAATGAGTCTTTGAC	1844
D	1662	ATCTCAATCATTTGATTTGACAAATTTCCGTATGTAATGATGCAATGAGTCTTTGAC	1721
Q	1845	TGCTGAATTAAGTATTAAGTAAATATGACAGTAGACAAACGTTTCACTTGTATTAATTA	1904
D	1722	TGCTGAATTAAGTATTAAGTAAATATGACAGTAGACAAACGTTTCACTTGTATTAATTA	1781
Q	1905	ATTCAATTCGAATTAAGTAAATATGACAGTAGACAAACGTTTCACTTGTATTAATTA	1964
D	1782	ATTCAATTCGAATTAAGTAAATATGACAGTAGACAAACGTTTCACTTGTATTAATTA	1841
Q	1965	GGTGAATGCTTGTATTAATGACATTCAGAAAGATTGAAAACAGATGTGACAGATT	2024
D	1842	GGTGAATGCTTGTATTAATGACATTCAGAAAGATTGAAAACAGATGTGACAGATT	1901
Q	2025	TCAATATGATCAAGATATCAATTAATAGTGGCTTTATCCGATGAAATTCGCTTAAATGA	2084
D	1902	TCAATATGATCAAGATATCAATTAATAGTGGCTTTATCCGATGAAATTCGCTTAAATGA	1961
Q	2085	AAAGAGAAATTAAGTAAATGACAAATATGCGAAACGACTCAGTGTGAAAGAACTT	2144
D	1962	AAAGAGAAATTAAGTAAATGACAAATATGCGAAACGACTCAGTGTGAAAGAACTT	2021
Q	2145	ACTCCAGATTCGAATTCATCATCATATAGCAACGAGCTTCATATCTAATTAATGA	2204
D	2022	ACTCCAGATTCGAATTCATCATCATATAGCAACGAGCTTCATATCTAATTAATGA	2064
Q	2205	GCAATCGAATTCATCATCATATAGCAACGAGCTTCATATCTAATTAATGA	2264
D	2065	GCAATCGAATTCATCATCATATAGCAACGAGCTTCATATCTAATTAATGA	2087
Q	2265	CATTACATTCAGAGAAATGACGATTTTAAAGAAATTAACGTCACTACCGGGGAC	2324
D	2088	TATTAACATTCAGAGAGGATGACGATTTTAAAGAAATTAACGTCACTACCGGGGAC	2147
Q	2325	TTTAAATGAGTGTATCCGACGATTTTATATCAAAAAATAGAGAGTCCGAAATTAAGC	2384
D	2148	CTTGAATGAGTGTATCCGACGATTTTATATCAAAAAATAGAGAGTCCGAAATTAAGC	2207
Q	2385	TTTAAATGAGTGTATCCGACGATTTTATATCAAAAAATAGAGAGTCCGAAATTAAGC	2444
D	2208	CTTAAATGAGTGTATCCGACGATTTTATATCAAAAAATAGAGAGTCCGAAATTAAGC	2267
Q	2445	GATTCGTTATATGCGAAACATGAAACATTTGATTTCCAGGTACGAGTCCGATGGCC	2504
D	2268	AATTCGCTGACATGCGAAACATGAAACATTTGATTTCCAGGTACGAGTCCGATGGCC	2327
Q	2505	GCTTTCAGTTGAAACCCCATTCGAGAGGTGCGAGAACCGAATGATGCGACCAACTT	2564
D	2328	GCTTTCAGTTGAAACCCCATTCGAGAGGTGCGAGAACCGAATGATGCGACCAACTT	2387

QY	2555	TGAATGGAATCCTGATCTAGAGTTGTTCTCGACAGATGGAAGAAAATGTGGCATATT	2622
Db	2398	TGAATGGAATCCTGATTTGATGTGTTCTCGACAGAGCGGGAAAATGTGCATCATTC	2447
QY	2625	CCATCATTTCTCTTGGGATTTATGATATATGATGCAACAATTCGATGGAATCTAGCGT	2683
Db	2448	CCATCATTTCTCTTGGGATTTGATGTTGATGCAACAATTCGACAGAGGATCTTAGCGT	2507
QY	2685	GTGGGTGATATTCAAGATTAGAAGCGCAGGAAGTTCATGCAAGCTAGGAAATCTGGAA	2744
Db	2508	GTGGGTGATATTCAAGATTAGAAGCGCAGGAAGTTCATGCAAGTATGGAATCTGGAA	2567
QY	2745	TATGGAAGAAAACCATTAATTAGGAGAAAGCATCTCTCGTGTGAAAGAGCAGGAAAA	2804
Db	2568	TATGGAAGAAAACCATTAATTAGGAGAAAGCATCTCTCGTGTGAAAGAGCGGAAAA	2627
QY	2805	ATGAGAGACAAACGTGAAAACTACAATTGAAAACAAAACGATATATACAGAGCACA	2864
Db	2628	ATGAGAGACAAACGGGAAAACTACAATTGAAAACAAAACGATATATACAGAGCACA	2687
QY	2865	AGAACTGTGGATCTTTATTTTGATGATTCATATATATGATTAACAAGCGATACAA	2924
Db	2668	AGAACTGTGGATCTTTATTCGATGATTCATATATATGATTAACAAGCGATACAA	2747
QY	2925	CATTGGCATGATTCATGCGGAGATTAACCTGTTATCGAATTTGAGAGGCTTATCTGTC	2984
Db	2748	CATTGGTATGATTCATGCGGAGATTAAGCTTTATCTGTTATCTGATCCACAGAGCTTATCTTC	2807
QY	2985	AGAAATTAATCTGTATCCCGGAGTGAATGCGAAAATTTTGAAAGATTTAGAAGGTGCGAT	3044
Db	2808	AGAACTACCTTCAATCCAGGAATTAATGTGATTTTGAAAGATTTAGAAACCGAT	2867
QY	3045	TATACATGSCATCTCCCTATACGATGCGAGAAAGTGGTTAAATATGATTTTATTA	3104
Db	2868	TTCTACATGSCATTAATCCCTATATGATGAGAAATGTCATTAATATGCGATTTCAATTA	2927
QY	3105	TGATATGACATGCTGGAATGTMAAGGACATGTAGT---GTACACAGAGCCATCACCG	3161
Db	2928	TGGCTTATCATGCTGGAACGTGAAGGACATGTAGATGTATGAACAAACACACACCG	2987
QY	3162	TTCTGTCTTGTATATCCCAAAATGGAACGAAAGTGCACACAGCTTGGCGTCTGCTC	3221
Db	2988	TTTGGTCTTGTGTATCCCGAAATGGAACGAAAGTGCACAAATTCGTGCTGTGCTC	3047
QY	3222	GGGCGTGGCATATCTCCGTGCACAGCGTACAAAGAGGATATGAGAGGGTGTGCT	3281
Db	3048	GGGCGTGGCATATCTCTCGGTTCACAGCTACAAAGAGGATATGAGAGGGTGTGCT	3107
QY	3282	AACGATCATGAAATCGAGAACATATACAGAGAACTMAAATTTMAAACTGTGAAAGA	3341
Db	3108	AACATCATGATGATCGAGAACATATACAGAGAACTMAAATTTMAAACTGTGAAAGA	3167
QY	3342	GGAAGTGAATCCAAAGATACAGAAAGTGAATGATTAATACGACACCAAGGTATACG	3401
Db	3168	GGAAGTGAATCCAAAGATACAGAAAGTGAATGATTAATACGACACCAAGGTATACG	3227
QY	3402	AG-----TATGTATTTCCCGTAATGCTGATATAGAGATCATATGAAGTTGA	3449
Db	3228	AGGATCCACAGATTCATGTATTTCCGTAATATCAATATAGAGATCATATGAAGTA	3287
QY	3450	TACTACAGCATCTGTTAATTAACAAACCGACTTATGAAGAGAAAGTATACAGATGACG	3509
Db	3288	TACTACAGCATCTGTTAATTAACAAACCGACTTACGAAGAGAAAGTATACAGATGAC	3347
QY	3510	AAGAGATTAATCATTTGTGAATATGACACAGGGTATGTGAATTAATCAACAATACAGCTGG	3569
Db	3348	AGGAGATTAATCATTTGTGAATATGACACAGGTATGTGAATTAATCAACAATACAGCTGG	3407
QY	3570	TTATATGACAAAGAAATTAAGATATCTTCCAGAAACCGATTAAGGATGATTAAGATTTGG	3629
Db	3408	TTATATGACAAAGAAATTAAGATATCTTCCAGAAACCGATTAAGGATGATTAAGATTTGG	3467

Qy 3630 AGAAGCGAAGGAGTATTGTAGACAGCGTGAATTACTCCTTATGAGGAA 3684  
|||  
Db 3468 AGAAGCGAAGGAGTATTGTAGACATGTGCAATTACTCCTTATGAGGAA 3522  
|||

Search completed: May 24, 2005, 18:20:10  
Job time : 585 secs

GenCore version 5.1.6  
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OM nucleic - nucleic search, using sw model

Run on: May 24, 2005, 18:05:45 ; Search time 2016 Seconds  
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11215.213 Million cell updates/sec

Title: US-10-614-524-1

Perfect score: 3687  
Sequence: 1 tgcactccaatagagaaaaa.....tactcttctagagagatag 3687

Scoring table: IDENTITY NUC  
Gapop 10.0 , Gapext 1.0

Searched: 5695437 seqs, 3066160638 residues

Total number of hits satisfying chosen parameters: 11390874

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%  
Listing first 45 summaries

Database :

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query	Length	DB ID	Description
1	3687	100.0	3687	17	US-10-614-524-1
2	3666.2	99.4	4173	17	US-10-428-961-37
3	3260.2	88.4	3684	17	US-10-428-961-62
4	3133.6	85.0	3687	18	US-10-809-953-9
5	1581.6	42.9	3558	9	US-09-826-660-22
6	1495.6	40.6	3624	10	US-09-988-462-6
7	1408.4	38.2	3522	9	US-09-826-660-5
8	1408.4	38.2	3522	11	US-09-837-961-7
9	1408.4	38.2	3522	18	US-10-825-751-7
10	1402	38.0	3534	9	US-09-873-873-25
11	1402	38.0	3534	10	US-09-916-956A-25

12	1402	38.0	3534	10	US-09-997-914-25	Sequence 25, Appl
13	1402	38.0	3534	16	US-10-365-645-25	Sequence 25, Appl
14	1402	38.0	3534	17	US-10-672-163-25	Sequence 25, Appl
15	1402	38.0	3534	18	US-10-739-482-25	Sequence 25, Appl
16	1402	38.0	3534	18	US-10-817-182-25	Sequence 25, Appl
17	1400.6	38.0	3531	9	US-09-873-873-9	Sequence 9, Appl
18	1400.6	38.0	3531	9	US-09-873-873-11	Sequence 11, Appl
19	1400.6	38.0	3531	9	US-09-873-873-13	Sequence 13, Appl
20	1400.6	38.0	3531	10	US-09-916-956A-9	Sequence 9, Appl
21	1400.6	38.0	3531	10	US-09-916-956A-11	Sequence 11, Appl
22	1400.6	38.0	3531	10	US-09-916-956A-13	Sequence 13, Appl
23	1400.6	38.0	3531	10	US-09-997-914-9	Sequence 9, Appl
24	1400.6	38.0	3531	10	US-09-997-914-11	Sequence 11, Appl
25	1400.6	38.0	3531	10	US-09-997-914-13	Sequence 13, Appl
26	1400.6	38.0	3531	16	US-10-365-645-9	Sequence 9, Appl
27	1400.6	38.0	3531	16	US-10-365-645-11	Sequence 11, Appl
28	1400.6	38.0	3531	16	US-10-365-645-13	Sequence 13, Appl
29	1400.6	38.0	3531	17	US-10-672-163-9	Sequence 9, Appl
30	1400.6	38.0	3531	17	US-10-672-163-11	Sequence 11, Appl
31	1400.6	38.0	3531	17	US-10-672-163-13	Sequence 13, Appl
32	1400.6	38.0	3531	18	US-10-739-482-9	Sequence 9, Appl
33	1400.6	38.0	3531	18	US-10-739-482-11	Sequence 11, Appl
34	1400.6	38.0	3531	18	US-10-739-482-13	Sequence 13, Appl
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36	1400.6	38.0	3531	18	US-10-817-182-11	Sequence 11, Appl
37	1400.6	38.0	3531	18	US-10-817-182-13	Sequence 13, Appl
38	1392.4	37.8	3534	9	US-09-873-873-27	Sequence 27, Appl
39	1392.4	37.8	3534	10	US-09-916-956A-27	Sequence 27, Appl
40	1392.4	37.8	3534	16	US-10-365-645-27	Sequence 27, Appl
41	1392.4	37.8	3534	16	US-10-365-645-27	Sequence 27, Appl
42	1392.4	37.8	3534	17	US-10-672-163-27	Sequence 27, Appl
43	1392.4	37.8	3534	18	US-10-739-482-27	Sequence 27, Appl
44	1392.4	37.8	3534	18	US-10-817-182-27	Sequence 27, Appl
45	1390	37.7	3567	10	US-09-972-175-58	Sequence 58, Appl

#### ALIGNMENTS

RESULT 1  
US-10-614-524-1  
Sequence 1, Application US/10614524  
Publication No. US20040016020A1  
GENERAL INFORMATION:  
APPLICANT: Arnaut, Greta  
APPLICANT: Boete, Annemie  
APPLICANT: Damme, Nicole  
APPLICANT: Mathieu, Eva  
APPLICANT: Vanneste, Scijn  
APPLICANT: Van Rie, Jeroen  
TITLE OF INVENTION: Insecticidal proteins from *Bacillus thuringiensis*.  
FILE REFERENCE: NEWBISUS2  
CURRENT APPLICATION NUMBER: US/10/614,524  
CURRENT FILING DATE: 2003-07-08  
PRIOR APPLICATION NUMBER: US/09/739,243  
PRIOR FILING DATE: 2000-12-19  
PRIOR APPLICATION NUMBER: 60/173387  
PRIOR FILING DATE: 1999-12-28  
NUMBER OF SEQ ID NOS: 13  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 1  
LENGTH: 3687  
TYPE: DNA  
ORGANISM: *Bacillus thuringiensis*  
FEATURES:  
NAME/KEY: CDS  
LOCATION: (1)..(3687)  
US-10-614-524-1

Query Match 100.0%; Score 3687; DB 17; Length 3687;  
Bacc Local Similarity 100.0%; Pred. No. 0;  
Matches 3687; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db	1	TTGACTTCAAAATAGGAAAAATGACAATGAAATTATTAATGGTTATATGCAATTCAGAGCTGTA	60
Qy	61	TCGAATCATCTCCACACAATGSAATCTATACACAGATGCTCGTATTTAGAGATTTCTTTGTGT	120
Db	61	TCGAATCATCTCCACACAATGSAATCTATACACAGATGCTCGTATTTAGAGATTTCTTTGTGT	120
Qy	121	ATAGCCGAGGGGAATATATATCATCCACTTTGAGCGATCAACAGTCCAAACGGGTATTT	180
Db	121	ATAGCCGAGGGGAATATATATCATCCACTTTGAGCGCATCAACAGTCCAAACGGGTATTT	180
Qy	181	AACATACCTGTGTAAATATATAGAGGTATATGAGCGCTAACCGTTGGTGGACAAATAGCTAGT	240
Db	181	AACATACCTGTGTAAATATATAGAGGTATATGAGCGCTAACCGTTGGTGGACAAATAGCTAGT	240
Qy	241	TTTTATATAGTTTTCTGTGTGGTGAATTTATGAGCCCGCGGACAGAGATCAGTGGGAAATTTTC	300
Db	241	TTTTATATAGTTTTCTGTGTGGTGAATTTATGAGCCCGCGGACAGAGATCAGTGGGAAATTTTC	300
Qy	301	CTAGAACATGTGCAACAACTTATTAATTCACAAATTAACAGAAATGCTAGGAATACGGCA	360
Db	301	CTAGAACATGTGCAACAACTTATTAATTCACAAATTAACAGAAATGCTAGGAATACGGCA	360
Qy	361	CTTGCTCGATTAACAAGGTTTAGAGATTTCTTTAGACCTTATCAACAGTCACTTGAAGAT	420
Db	361	CTTGCTCGATTAACAAGGTTTAGAGATTTCTTTAGACCTTATCAACAGTCACTTGAAGAT	420
Qy	421	TGGCTAGAAAAACGGTAGATGACAAAGAACAGAAAGTGTCTTTATACCAATATATAGCC	480
Db	421	TGGCTAGAAAAACGGTAGATGACAAAGAACAGAAAGTGTCTTTATACCAATATATAGCC	480
Qy	481	TTAGAACTTGAATTTCTTATTAATGCGATGCGGCTTTGCGAATTAGAAAAACAAGAGTTCCA	540
Db	481	TTAGAACTTGAATTTCTTATTAATGCGATGCGGCTTTGCGAATTAGAAAAACAAGAGTTCCA	540
Qy	541	TTATTAATGCTATATGCTCAAGCTGCAAAATTACACCTATTAATTTAGAGAGATGCTCT	600
Db	541	TTATTAATGCTATATGCTCAAGCTGCAAAATTACACCTATTAATTTAGAGAGATGCTCT	600
Qy	601	CTTTTTGGTATGTAATTTGGGCTTACATCGCAGGAAATTCACCGTTATATAGACGCGCAA	660
Db	601	CTTTTTGGTATGTAATTTGGGCTTACATCGCAGGAAATTCACCGTTATATAGACGCGCAA	660
Qy	661	GTGGAACAAACGAGAGATTATTCGCACTATTTGCGTAGAATGCTATTAATACAGTCTAAAT	720
Db	661	GTGGAACAAACGAGAGATTATTCGCACTATTTGCGTAGAATGCTATTAATACAGTCTAAAT	720
Qy	721	AGCTTGAGAGGGAACAATGCGCGCAAGTTGGGTGGCTTATATCAATTCCTTAGAGATCTA	780
Db	721	AGCTTGAGAGGGAACAATGCGCGCAAGTTGGGTGGCTTATATCAATTCCTTAGAGATCTA	780
Qy	781	ACGTTAGGGGTATTAAGATCTATGAGGACATAATCCCAAGCTATGACACTGCACTTATCCA	840
Db	781	ACGTTAGGGGTATTAAGATCTATGAGGACATAATCCCAAGCTATGACACTGCACTTATCCA	840
Qy	841	ATTAATACGATGTGCTCAGTTAAACAAGGAAATTTATACAGACGCAATTTGAGCAACAGGG	900
Db	841	ATTAATACGATGTGCTCAGTTAAACAAGGAAATTTATACAGACGCAATTTGAGCAACAGGG	900
Qy	901	GTAATATATGCAAGTATGATTTGGTATATATATATATATGCACTTCGTTTCCGCTATAGAG	960
Db	901	GTAATATATGCAAGTATGATTTGGTATATATATATATATGCACTTCGTTTCCGCTATAGAG	960
Qy	961	ACTGCGGTATATCCGAAGCCGCAATCTATCTTAATTTCTAGAACAACTTACAAATTTTAGC	1020
Db	961	ACTGCGGTATATCCGAAGCCGCAATCTATCTTAATTTCTAGAACAACTTACAAATTTTAGC	1020
Qy	1021	ACTTCATACAGATGAGTGTCTACTAGGCAATATGACTTTCTGCGGGGGGCAACAATTTCAA	1080
Db	1021	ACTTCATACAGATGAGTGTCTACTAGGCAATATGACTTTCTGCGGGGGGCAACAATTTCAA	1080
Qy	1081	TCTCGGCCAATAGAGAGCGGATTAATAATCCTCAACGATGGGTCTACCAATATCTTATTT	1140

Db	1081	TTCTGGCGCAATAGAGGGCGGATTAATAATCCTCAACGAGATGGGTCTAACAAATCTTCTATT	1140
Qy	1141	AATCTGTAAAGATTATCATTTCTTCTCTCGACGAGTATTTGGACTGAAATCATATGCAAGA	1200
Db	1141	AATCTGTAAAGATTATCATTTCTTCTCTCGACGAGTATTTGGACTGAAATCATATGCAAGA	1200
Qy	1201	GTGCTTCTAAGGGGAATTATACCTTGAACCGATACAGAGTGCCTCTGCTGTATGTTTAAT	1260
Db	1201	GTGCTTCTAAGGGGAATTATACCTTGAACCGATACAGAGTGCCTCTGCTGTATGTTTAAT	1260
Qy	1261	TTTAGGAAACCTCGAAGATATCTTTTGAAGAGAGTACTGAATATAGTCAACCTATAG	1320
Db	1261	TTTAGGAAACCTCGAAGATATCTTTTGAAGAGAGTACTGAATATAGTCAACCTATAG	1320
Qy	1321	TCACCTGGGCTTCAATTAAAGATTCAGAACTGAATTACACACAGAAACACAGAAACGA	1380
Db	1321	TCACCTGGGCTTCAATTAAAGATTCAGAACTGAATTACACACAGAAACACAGAAACGA	1380
Qy	1381	CCAAATTATGAATCATATAGTATTCATCAATAGGGCTCAATTCACAATCTAG	1440
Db	1381	CCAAATTATGAATCATATAGTATTCATCAATAGGGCTCAATTCACAATCTAG	1440
Qy	1441	GTGCATGTACAGATATATCTTTGGAACGACCGTAGTGCAGATGCTACAAATACCATAGT	1500
Db	1441	GTGCATGTACAGATATATCTTTGGAACGACCGTAGTGCAGATGCTACAAATACCATAGT	1500
Qy	1501	TCAGATAGCATTAACAATAACATTTGTATTAATCATTTCAACTTAATCAGGACTCT	1560
Db	1501	TCAGATAGCATTAACAATAACATTTGTATTAATCATTTCAACTTAATCAGGACTCT	1560
Qy	1561	GTAGTCAAGTGGCCACGAATTTTACAGAGGGGATATATCCGAATACGTTAATGATAGT	1620
Db	1561	GTAGTCAAGTGGCCACGAATTTTACAGAGGGGATATATCCGAATACGTTAATGATAGT	1620
Qy	1621	GTACTAGTATGGGCTCTTAATTTTAAATTAATCATATTAACGCGGTATCCGCGAGAGTT	1680
Db	1621	GTACTAGTATGGGCTCTTAATTTTAAATTAATCATATTAACGCGGTATCCGCGAGAGTT	1680
Qy	1681	CGTTATGCTGCTTCTCAAAACAATGGTCTGAGGGTAACTGTGCGAGGAGTACTACTTTT	1740
Db	1681	CGTTATGCTGCTTCTCAAAACAATGGTCTGAGGGTAACTGTGCGAGGAGTACTACTTTT	1740
Qy	1741	GATCAAGAGATTCCTCTAGTATCTATGAGTGCAGAAATGAGTCTTTGACATCTCAATCTTAA	1800
Db	1741	GATCAAGAGATTCCTCTAGTATCTATGAGTGCAGAAATGAGTCTTTGACATCTCAATCTTAA	1800
Qy	1801	TTTGCAGAAATTTCCGTAGGTAATTAGTGCATCTGGCAGTCAAACTGCTGGAAATAGTATA	1860
Db	1801	TTTGCAGAAATTTCCGTAGGTAATTAGTGCATCTGGCAGTCAAACTGCTGGAAATAGTATA	1860
Qy	1861	AGTAATAATGCAAGGTAGACAAACGTTTCACTTGTATTAATTTGAATTCATTTCCAAATTACT	1920
Db	1861	AGTAATAATGCAAGGTAGACAAACGTTTCACTTGTATTAATTTGAATTCATTTCCAAATTACT	1920
Qy	1921	GCAACTTTGCAAGCAGATACGATTTTGAAGAGGCGCAAGGCGGTGAATGCTCTGT	1980
Db	1921	GCAACTTTGCAAGCAGATACGATTTTGAAGAGGCGCAAGGCGGTGAATGCTCTGT	1980
Qy	1981	ACTAATCGAAATCCAAAGATTGAAAACGATGTGACATTAATCATATTTGATCAAGTA	2040
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Qy	2041	TTCAATTTAGTGGCGTGTATATGCGATGATTTGCTGTAGTGAAGAGAGATTACTT	2100
Db	2041	TTCAATTTAGTGGCGTGTATATGCGATGATTTGCTGTAGTGAAGAGAGATTACTT	2100
Qy	2101	GAGAAAGTGAATATGCGAAACGACTCAGTATGTAAGAAACCTTATCTTCAAGATCCAAAC	2160
Db	2101	GAGAAAGTGAATATGCGAAACGACTCAGTATGTAAGAAACCTTATCTTCAAGATCCAAAC	2160
Qy	2161	TTTGCATTCATCAATAGCAACGCAATTCATATCTATGAGCAATGGAATTTTACA	2220



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Db 2221 TCTATCCATGAACATCTGAACA TGAATGATGGGAAGTGAACAATTACATCCAGAA 2280  
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Db 2281 GGAATGACCTATTTAAAGAAATTAAGTCACTACCGGGGACTTTTAATGAGTGTAT 2340  
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Qy 2461 AAAATGAAACATTTGATGATTCAGAGTCCGATCCGATGCGCTTTCACTTGAAGC 2520  
Db 2461 AAAATGAAACATTTGATGATTCAGAGTCCGATCCGATGCGCTTTCACTTGAAGC 2520  
Qy 2521 CCAATGGAAAGTCCGAGAACGAAATCGATGCGCAACAATTTGATGAAATCCGAT 2580  
Db 2521 CCAATGGAAAGTCCGAGAACGAAATCGATGCGCAACAATTTGATGAAATCCGAT 2580  
Qy 2581 CTAGATTGTTCTGACAGAGATGAGAAATGTCGATCATTTCCATCATTTCTCTTTC 2640  
Db 2581 CTAGATTGTTCTGACAGAGATGAGAAATGTCGATCATTTCCATCATTTCTCTTTC 2640  
Qy 2641 GATATTGATTTGATGATGACAGATTCGATGAGATCTAGGCGGTGATTCAG 2700  
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Db 2761 TTATTAGAGAGACATGCTCTCGTGTAAAGAGAGACAGAGAAATGGAAGCAAAAGT 2820  
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Db 2881 TTATTGTGATTTCTCAATTAATAGTTTCAAGCGGATCAAAATGGAATTCAT 2940  
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Db 3001 CCGGAGTGAATGCGGAAATTTTGAAGATTAAGAGTGCATTAATCACTGCATTC 3060  
Qy 3061 CTATAGACGCGGAAATGCTGTTAAATGATGATTTTAAATGATGATGATGATG 3120  
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Qy 3121 AATGTAAAGGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 3180  
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Qy 3181 GAAATGAAAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 3240  
Db 3181 GAAATGAAAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 3240  
Qy 3241 CGATGACAGCGGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 3300  
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Qy 3301 AACAAATCAGACGAACTTAAATTTAAAACTGTGAAGAGAGAGATGATTCAGCGAT 3360  
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Qy 3361 ACAGAAACGCTATATGATTTATCTGACACCAAGGTACAGCATATTAATCCCGTAT 3420  
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Qy 3421 GCTGATATGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 3480  
Db 3421 GCTGATATGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 3480  
Qy 3481 TATGAAGAGAAACGATTAACAGATGATGATGATGATGATGATGATGATGATGATG 3540  
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Qy 3541 TATGTAATTTATCCACATCACTACAGCTGTTATATGACAAAGATTAATCTTCCA 3600  
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Qy 3601 GAAACGATTAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 3660  
Db 3601 GAAACGATTAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 3660  
Qy 3661 GTGGAATTAATCTCTTAATGAGAGATAG 3687  
Db 3661 GTGGAATTAATCTCTTAATGAGAGATAG 3687

RESULT 2  
US-10-428-961-37  
; Sequence 37, Application US/10428961  
; Publication No. US2003023711A1  
; GENERAL INFORMATION:  
; APPLICANT: Baum, James A.  
; APPLICANT: Chu, Chih-Rei  
; APPLICANT: Donovan, William P.  
; APPLICANT: Gilmer, Amy J.  
; APPLICANT: Rudat, Mark J.  
; TITLE OF INVENTION: Lepidopteran-Active Bacillus thuringiensis Delta-Endotoxin  
; TITLE OF INVENTION: Polynucleotides, Compositions, and Methods of Use (Amended)  
; FILE REFERENCE: MECO201--1  
; CURRENT APPLICATION NUMBER: US/10/428,961  
; CURRENT FILING DATE: 2003-05-02  
; PRIOR APPLICATION NUMBER: 09/661,322  
; PRIOR FILING DATE: 2000-09-13  
; PRIOR APPLICATION NUMBER: 60/153,995  
; PRIOR FILING DATE: 1999-09-15  
; SOFTWARE: PatentIn version 3.2  
; SEQ. ID NO 37  
; LENGTH: 4173  
; TYPE: DNA  
; ORGANISM: Bacillus thuringiensis  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (1)..(3687)  
US-10-428-961-37

Query Match 99.4%; Score 3666.2; DB 17; Length 4173;  
Best Local Similarity 99.6%; Pred. No. 0;  
Matches 3674; Conservative 0; Mismatches 13; Indels 0; Gaps 0;  
Qy 1 TTGACTTCAATGAGAAATGGAATGAAATTAATGCTTTATCGATTCAGCTGTA 60  
Db 1 TTGACTTCAATGAGAAATGGAATGAAATTAATGCTTTATCGATTCAGCTGTA 60  
Qy 61 TCGAATCATTCACACAAATGATCTATACAGAGTCTGATATGAGATTCCTTGTGT 120  
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121 ATAGCGAGGGGATATATCAATCACTGTAGCGCAACAAGTCCAAAGGGATTT 180  
181 AACATAGCTGGTAGAATACTAGGTGTATTAGCGTACCGTTTGCAGCAAAATAGCTAGT 240  
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241 TTTTATATGTTTTCTGTGTGTGAATTAATGCCCCCGGCGAGAGATCATGTGGGAAATTTTC 300  
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961 ACTGCGGTTATTCGGAAGCCCGCATCTATCTGATTTTCTAGAACACTTAACTTTTAAAGC 1020  
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1021 ACTTCAATCAAGATGAGTGTCTATAGGCAATGACTTATACGCGGGGGGCAACAATTCAA 1080  
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2221 TCTATTCATGAACAAATCTGAAATGATGATGATGATGATGATGATGATGATGATGATGAT 2280  
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Db 361 CTTGCTCGATTACAAGTTTAGAGAAATTCCTTAGAGCCTATCAAGAGTCACTTGAAGAT 420  
Qy 421 TGGCTAGAAAACCGTATGATGACAGAACGAGAAGTGTCTTTATATACCAATATATAGCC 480  
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Qy 481 TTAGAACTGATTTCTTATATGAGATCCGCTTTGCGAATTAGAAAACCAAGAGTTCCA 540  
Db 481 TTAGAACTGATTTCTTATATGAGATCCGCTTTGCGAATTAGAAAACCAAGAGTTCCA 540  
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Db 541 TTATATATGATATGCTCAAGCTGCMAATTTTACACCTATTTATATGAGATGCTCT 600  
Qy 601 CTTTTTGTATGTAATTTGGGCTTACATCGCAGAGAAATTCACGTTATTTAGCCGCAA 660  
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Db 661 GTGGAAACAAACGAGATTTTCTGATTTATGCGCAAGATGATATATACAGGCTTTAAAT 720  
Qy 721 AGCTTAGAGAGGACAAATGCGCAAGTTGGGTGCGTTATATATCAATTCGCTAGAGATCT 780  
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Db 901 GCACCTTCAGGAATTTGCAAGTACGAATTTGTTATATATATATGACACATGTTTTCTGCC 960  
Qy 955 ATAGAGACTGCGGTTATCCGAGCCCGCATCTACTGATTTTCTAGAAACAATTCACAT 1014  
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Qy 1135 TCTATTAATCTGTAAGATTAATCAATTTCTCTGAGACGTAATATGAGTGAATCATAT 1194  
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Qy 1141 TCTATTAATCTGTAAGATTAATCAATTTCTGAGACGTAATATGAGTGAATCATAT 1200  
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Qy 1375 GAACGACCAATTTATGATCATATATGATATAGTTATCTCATATAGGCTCATTTCCAA 1434  
Db 1375 GAACGACCAATTTATGATCATATATGATATAGTTATCTCATATAGGCTCATTTCCAA 1434

Db 1372 GAACGACCAATTTATGATCATATATGATATAGTTATCTAATATATAGACTAATATCAGCA 1431  
Qy 1435 TCTAGGGTCATGTAACCAATATTTCTTGAACGCAACCGTAGTCAGATGCTACAAATACC 1494  
Db 1432 AACACTTTAGAGACACCAATATTTCTTGAACGCAACCGTAGTCAGATGCTACAAATACC 1491  
Qy 1495 ATTTAGTTCAGATATGCAATTAACAAATATACATTTGTTAAATCACTTAAATTCAGGT 1554  
Db 1492 ATTTAGTTCAGATATGCAATTAACAAATATACATTTGTTAAATCACTTAAATTCAGGT 1551  
Qy 1555 ACCCTGTATGTCAGTGGCCCAAGATTTTACAGAGGGGATATATCCGAATTAATCTTAAAT 1614  
Db 1552 ACCCTGTATGTCAGTGGCCCAAGATTTTACAGAGGGGATATATCCGAATTAATCTTAAAT 1611  
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Qy 1675 AGAGTTCCTTATGCTGCTTCTGAAACAAATGTCCTGAGGGGTAACTGTGCGAGGAGTACT 1734  
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Qy 1735 ACTTTTGATCAAGATTTCCCTAGTACTATATAGTCAATGAGTCTTTGACATCTCAATCA 1794  
Db 1732 ACTTTTGATCAAGATTTCCCTAGTACTATATGAGTCAATGAGTCTTTGACATCTCAATCA 1791  
Qy 1795 TTTAGATTTGCAAAATTTCTGTAGGTATTAAGTATGATCTGCGAGTCAAACTGTGGAAT 1854  
Db 1792 TTTAGATTTGCAAAATTTCTGTAGGTATTAAGTATGATCTGCGAGTCAAACTGTGGAAT 1851  
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Db 1852 AGTATATGTAATTAATGCAAGTATGACAAACGTTTCACTTTGATTAATTTGAATTCATCCA 1911  
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Db 1912 ATTACTGCAACCTTCGAGACAGATTCAGATTTAGAAAAGGCGCAAGGCGGTAATGCT 1971  
Qy 1975 CTGTATTACTAATACGAATCCAGAAATTTGAATAACGATGTGACAGATTAATCATATTGAT 2034  
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Qy 2035 CAAATATCCAAATTTAGTGGCGGTCTTATGCGATGAAATTCCTGCTTAATGAAAAGAGAA 2094  
Db 2032 CAAATATCCAAATTTAGTGGCGGTCTTATGCGATGAAATTCCTGCTTAATGAAAAGAGAA 2091  
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Qy 2275 CAGGAAGAAATGACGTAATTTAAGAAATTAAGTCACTACCGGGGACTTTTAAATGAG 2334  
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Qy 2395 TACCAATTAAGAGGTAATTAAGATATGTCAGAAATTTTATAGATATATTTGATTCGTTAT 2454  
Db 2392 TACCAATTAAGAGGTAATTAAGATATGTCAGAAATTTTATAGATATATTTGATTCGTTAT 2451  
Qy 2455 AATGCGAAACATGAACATTTGATGTTCCAGATACCGAAGTCCGATATGCGCGCTTTCAGTT 2514  
Db 2452 AATGCGAAACATGAACATTTGATGTTCCAGATACCGAAGTCCGATATGCGCGCTTTCAGTT 2511

Qy	2515	AAAAGCCCAATCCGGAAGSTGGCGGAACCGAATGATGCGCAACCAATTTTGAATGAAAT	2514
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Db	2632	TCTTTGATATTTGATATTTGATGCAAGACTTGCATGGAATCTAAGCGTGGGTGCTA	2631
Qy	2695	TTCAAGATTAAGACGCGAAGGTCATGCAAGACTAGGGAATCTGGAATTTATTGAAGAG	2754
Db	2692	TTCAAGATTAAGACGCGAAGGTCATGCAAGACTAGGGAATCTGGAATTTATTGAAGAG	2751
Qy	2755	AAACCATATATAGGAGAGCACTGCTCTGTGGAAGAGAGAGAAAAATGAGAGAC	2814
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Qy	2815	AAACGTGAAAACTACATTTGGAAAACAAAAGATATACAGAGGCAAAAAGAGCTGTG	2874
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Qy	2875	GATGCTTATTTGTTAGATTCTCAATATATATAGATTACAGCGGATACAAACATTTGGCATG	2934
Db	2872	GATGCTTATTTGTTAGATTCTCAATATATATAGATTACAGCGGATACAAACATTTGGCATG	2931
Qy	2935	ATTGATGGGAGATTAACCTTGTTCAATGCAATTTGAGAGGCTTATCTGTCAGAATTAATCT	2994
Db	2932	ATTGATGGGAGATTAACCTTGTTCAATGCAATTTGAGAGGCTTATCTGTCAGAATTAATCT	2991
Qy	2995	GTTATCCCGGGTGTAAATGTCGGAATTTTGAAGATTAAGAGGTGCAATATACATGCA	3054
Db	2992	GTTATCCCGGGTGTAAATGTCGGAATTTTGAAGATTAAGAGGTGCAATATACATGCA	3051
Qy	3055	ATCTCCCTATACATGCGAGAAATGTCGTTAAAAATGCTGAATTTTAATATGATTAAGCA	3114
Db	3052	ATCTCCCTATACATGCGAGAAATGTCGTTAAAAATGCTGAATTTTAATATGATTAAGCA	3111
Qy	3115	TGCTGGAAATGTAAAGGGCATGTAGATGTACACAGAGCCATCACCGTTCTGTCTTGT	3174
Db	3112	TGCTGGAAATGTAAAGGGCATGTAGATGTACACAGAGCCATCACCGTTCTGTCTTGT	3171
Qy	3175	ATCCCAAGATGGGAAGCAGAGTGTCAACAGTCGCGCTGTCCGGGGCGTGGCTAT	3234
Db	3172	ATCCCAAGATGGGAAGCAGAGTGTCAACAGTCGCGCTGTCCGGGGCGTGGCTAT	3231
Qy	3235	ATCTCCGTGTCAAGCGGTCAAAAGAGGATATGAGAGGTTGTGTAAACATCATGAA	3294
Db	3232	ATCTCCGTGTCAAGCGGTCAAAAGAGGATATGAGAGGTTGTGTAAACATCATGAA	3291
Qy	3295	ATCGAAGAACATACAGACGAATCTAAATTTAAAACTGTGAAGAGAGAGAGTGTATCCA	3354
Db	3292	ATCGAAGAACATACAGACGAATCTAAATTTAAAACTGTGAAGAGAGAGAGTGTATCCA	3351
Qy	3355	ACGGATACAGGAAGGTGTATGATTTATCTGCAACCAAGGTACAGCATGTGTATTTCC	3414
Db	3352	ACGGATACAGGAAGGTGTATGATTTATCTGCAACCAAGGTACAGCATGTGTATTTCC	3411
Qy	3415	CGTATGCTGATATGAGATGATATATGAATTTATCTACAGATCTGTAAATTAACAA	3474
Db	3412	CGTATGCTGATATGAGATGATATATGAATTTATCTACAGATCTGTAAATTAACAA	3471
Qy	3475	CCGACTTATGGAAGAAAGCTATACAGATGTACGAGAGATTAATCATTTGGAATATGAC	3534
Db	3472	CCGACTTATGGAAGAAAGCTATACAGATGTACGAGAGATTAATCATTTGGAATATGAC	3531
Qy	3535	AGAGGGTATGTGAATTTATCCACCATACAGCTGTTATATGACAAAAGATTAAGATAC	3594
Db	3532	AGAGGGTATGTGAATTTATCCACAGATACAGCTGTTATATGACAAAAGATTAAGATAC	3591

QY	3595	TTCCAGAAACCGTAAGTATGATTTGAGTTTGAGAAACGAAAGGAATTATATGTA	3654
Db	3592	TTCCAGAAACCGTAAGTATGATTTGAGTTTGAGAAACGAAAGGAATTATATGTA	3651
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Db	3652	GACGACGTGGAACTACTCTTATGAGCAATATG	3684

RESULT 4  
US-10-809-953-9

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: Sequence 9, Application US/10809953
: Publication No. US20040181825A1
: GENERAL INFORMATION:
: APPLICANT: Van Mellaert, Herman
: APPLICANT: Botterman, Johan
: APPLICANT: Van Rie, Jeroen
: APPLICANT: Joos, Henk
: TITLE OF INVENTION: RECOMBINANT PLANT EXPRESSING NON-COMPETITIVELY BINDING Bt INSECTICI
: TITLE OF INVENTION: CRYSTAL PROTEINS
: FILE REFERENCE: 021565-078
: CURRENT APPLICATION NUMBER: US/10/809,953
: CURRENT FILING DATE: 2004-03-26
: PRIOR APPLICATION NUMBER: US/09/661,016
: PRIOR FILING DATE: 2000-09-13
: PRIOR APPLICATION NUMBER: PCT/EP90/00905
: PRIOR FILING DATE: 1990-05-30
: PRIOR APPLICATION NUMBER: GB 89401499.2
: PRIOR FILING DATE: 1989-05-31
: NUMBER OF SEQ ID NOS: 10
: SOFTWARE: Patentin Ver. 2.0
: SEQ ID NO 9
: LENGTH: 3687
: TYPE: DNA
: ORGANISM: Bacillus thuringiensis
: FEATURE:
: NAME/KEY: CDS
: LOCATION: (1)..(3687)
US-10-809-953-9

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Query Match	Score	DB	Length
85.0%	3133.6	18	3687

Best Local Similarity 91.1%; Pred. No. 0;  
Matches 3373; Conservative 0; Mismatches 299; Indels 30; Gaps 3;

OY	1	TTGACTTCAATAGAGAAAATAAGAAATGAATTTAAATGCTTATGATTCAGATCCAGCTGTA	60
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Db	46	TCGATCATCTCCGACAAATGAGATCTATTACCAATGCTGTATTAGAGATGCTGTGT	105
OY	121	ATAGCCGAGGGGAATTAATATCATATCCATTGTTAGCGATCAAGATGTCCAAACGGTAATT	180
Db	106	ATACCCGAGGGGAACAATATTGATTCATTGTTAGCCATCAACATGCCGTAATT	165
OY	181	AACATAGCTGGTAGAATACTAGTGTAATTTAGGGCTACGTTTGCTGACAAATAGCTAGT	240
Db	166	AACATAGCTGGTAGAATACTAGGGGTAATGGGGCTACCGTTTGCTGACAACTAGCTAGT	225
OY	241	TTTATATAGTTTCTGTGTGTGTAATTATGGCCCCGCGCAGAGATCAATGGGAATTTTC	300
Db	226	TTTATATAGTTTCTGTGTGTGTAATTATGGCCCCGCGCAGAGATCAATGGGAATTTTC	285
OY	301	CTAGAACATGTCGAACAATTATTAATCAACAATAACAGAAAATGCTAGGAATACGGCA	360
Db	286	CTAGAACATGTCGAACAATTATTAATCAACAATAACAGAAAATGCTAGGAATACGGCT	345
OY	361	CTTCTCGATTAACAAGGTTTAGAGGATTCCTTTAGACCTATCAACAGTCACTTGAAGAT	420
Db	346	CTTCTCGATTAACAAGGTTTAGAGGATTCCTTCAAGACCTATCAACAGTCACTTGAAGAT	405
OY	421	TGGCTAGAAAACGCTGATGATGCAGAAGCAGAGATGCTTTTATATACCAATATATAGCC	480



Db 406 TGGCTAGAAAACCGTATGATGCAAGAACGAAAGTGTCTTCTATCCCAATATATAGCT 465  
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Db 466 TTGAACCTTGATTTTCTTAAATGCGATGCCCTTTTCGCAATTGAAACCAAGAGTTCCA 525  
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Qy 601 CTTTATGATGATGATTTGGGCTTACATCGACAGAAATTCACGTTATATGAGCGCCAA 660  
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Db 646 GTGGAACGAAAGAGATTTATCCGACTATTCGCTAGATAGTATATACAGGCTTAAAT 705  
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Qy 961 ACTGCGGTATTCGCAAGCCGCAATCTTACTGATTTCTAGAACAACTTACAAATTTTACG 1020  
Db 946 GCTGCGGTATTCGCAAGCCGCAATCTTACTGATTTCTAGAACAACTTACAAATTTTACG 1005  
Qy 1021 ACTTCATACGATGAGTGTCTACTAGGACATATGACTTACTGCGCGGGGCAACAAATTTCA 1080  
Db 1006 GCTTCATACGATGAGTGTCTACTAGGACATATGACTTACTGCGCGGGGCAACAAATTTCA 1065  
Qy 1081 TCTGCGGCAATAGAGGCGGATTAATATCTCAACGATGGGTCTACCAATCTTCTAT 1140  
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Qy 1141 AATCTGTAAGATTTATCAATCTTCTCGAGAGCGTATATGGACTGAATCATATGACGA 1200  
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Qy 1201 GTGCTTCTATGAGGAAATTTACCTTGAACCTATTCATGCTGCTCTACTGTAGATTTAAT 1260  
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Qy 1261 TTTTAGAAGCCTCGAATCTTTTGAAGAGTATCTGTAACCTATATGTAACCTATGAG 1320  
Db 1246 TTTTAGAAGCCTCGAATCTTTTGAAGAGTATCTGTAACCTATATGTAACCTATGAG 1305  
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Db 1306 TCACCTGGGCTTCAATTAAGAAATTCGAAACTGAATTTACACAGAAACAGACGAA 1365  
Qy 1381 CCAAAATATGATATATAGTATGATAGGTTATCTCAACATAGGCTCATTTGACAACTAGG 1440  
Db 1366 CCAAAATATGATATATAGTATGATAGGTTATCTCAACATAGGTTATGATAGG 1425  
Qy 1441 GTGCAATGATCAATATTTCTTGAAGCAACCTATGTCAGATGTTACAAATACATTAAT 1500  
Db 1426 GTGCAATGATCAATATTTCTTGAAGCAACCTATGTCAGATGTTACAAATACATTAAT 1485  
Qy 1501 TCAGATGATTAACAAATATCAATTTGTAATATCATTAACCTTAATTCAGGATACCTCT 1560

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Qy 1741 GATCAAGATTCCTTATGATATATAGTGCATAATGACTCTTTGACATCTCAATCATTTAGA 1800  
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Qy 1918 ACTGCAACCTTGAACAGAAATATCGATTTTGAAGAGGCCGCAAGAGCGGTGAATGCTCTG 1977  
Db 1906 ACTGCAACCTTGAACAGAAATATGATTTTGAAGAGGCCGCAAGAGCGGTGAATGCTCTG 1965  
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Qy 2038 GTATCCAAATTTAGTGGCGGTATATGATGATGATTTCTGCTTATGATGAAAGAGAGATTA 2097  
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Qy 2098 CTTGAGAAAGTGAATATATGCAAGACATCACTGATGAAAGAACTTACTCCAAATCCA 2157  
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Db 2566 GATCTGATTTGTTCTCGACAGATGGAAGAAATGTCGCATCATTTCCATCATTTCTCT 2625



2638 TTGATATTTGATTTGATGCAAGACTTTCATGAGAACTTACGGCTGTGGTATTC 2697  
2626 TTGGATATTTGATTTGATGCAAGACTTTCATGAGAACTTACGGCTGTGGTATTC 2685  
2698 AAGATTAAGACGCAAGAAAGCTATGCAAGACTTACGGAACTTGAATTTATGAAGAAA 2757  
2686 AAGATTAAGACGCAAGAAAGCTATGCAAGACTTACGGAACTTGAATTTATGAAGAAA 2745  
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2746 CCATTAATTAGAGAAAGCACTGTCTGTGTGAAGAGCAAGAAATTTGAAGACAAA 2805  
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2806 CGTGAATACTCAATTTGAAAACAAACGAGTATATACAGAGGCAAAAGAGCTGTGAT 2865  
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2866 GCTTAATTGATGATTTGATGCAATTTATGATTAACAGGGGATACAAACTTGGCATGAT 2925  
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2926 CATGCGCAGATAAATCTTTCATGCAATTTGAGAGGCTTATCTTTCGATTTACTGTT 2985  
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3106 TGAATTTAAAGGCAATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3165  
3178 CGAATTTGGAAGCAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3237  
3166 CGAATTTGGAAGCAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3225  
3238 CTCCGTGTCACAGGTCACAAAGAGGATTTGAGAGGCTTGTATGATGATGATGATGATGAT 3297  
3226 CTTCGTGTCACAGGTCACAAAGAGGATTTGAGAGGCTTGTATGATGATGATGATGATGAT 3285  
3298 GAGAACATACAGAGCAATTTAAATTTAAATTTAAATTTAAATTTAAATTTAAATTTAAAT 3357  
3286 GAGAACATACAGAGCAATTTAAATTTAAATTTAAATTTAAATTTAAATTTAAATTTAAAT 3345  
3358 GATACAGAAAGCTGTAATGATTTATGATGATGATGATGATGATGATGATGATGATGATGAT 3405  
3346 GATACAGAAAGCTGTAATGATTTATGATGATGATGATGATGATGATGATGATGATGATGAT 3405  
3406 TGTATTTCCGTTAATGCTGATATGAGATGATGATGATGATGATGATGATGATGATGATGAT 3465  
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3466 AATTACAAACGACTTATGAGAAAGAAAGCTATCAGATGATGATGATGATGATGATGATGAT 3525  
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3526 GAAATATGACAGAGGCTATGATTTATGATGATGATGATGATGATGATGATGATGATGATGAT 3585  
3526 GAAATATGACAGAGGCTATGATTTATGATGATGATGATGATGATGATGATGATGATGATGAT 3585  
3586 TTAGAAATCTTCCAGAAACGATTAAGATGATGATGATGATGATGATGATGATGATGATGAT 3645  
3586 TTAGAAATCTTCCAGAAACGATTAAGATGATGATGATGATGATGATGATGATGATGATGAT 3645  
3646 TTTATTTAGACAGCTGATTTATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3687  
3646 TTTATTTAGACAGCTGATTTATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3687

RESULT 5  
US-09-826-660-22  
; Sequence 22, Application US/0982660  
; Patent No. US20010026940A1  
; GENERAL INFORMATION:  
; APPLICANT: Cardineau, Guy A.  
; APPLICANT: Steilman, Steven J.  
; APPLICANT: Narva, Kenneth E.  
; TITLE OF INVENTION: Plant-Optimized Genes Encoding Pesticidal Toxins  
; FILE REFERENCE: MA-714XC2D1  
; CURRENT APPLICATION NUMBER: US/09/826,660  
; CURRENT FILING DATE: 2001-04-05  
; PRIOR APPLICATION NUMBER: 09/178,252  
; PRIOR FILING DATE: 1998-10-23  
; PRIOR APPLICATION NUMBER: 60/065,215  
; PRIOR FILING DATE: 1997-11-12  
; PRIOR APPLICATION NUMBER: 60/076,445  
; PRIOR FILING DATE: 1998-03-02  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 22  
; LENGTH: 3558  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Synthetic B.t. toxin gene  
US-09-826-660-22  
  
Query Match 42.9%; Score 1581.6; DB 9; Length 3558;  
Best Local Similarity 66.5%; Pred. No. 0;  
Matches 2458; Conservative 0; Mismatches 1084; Indels 156; Gaps 7;  
  
QY 2 TGAATTTAAAGGCAATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 61  
DB 2 TGAATTTAAAGGCAATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 61  
QY 62 CGAATTTGGAAGCAAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 121  
DB 62 CTACATTTGCTCAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 121  
QY 122 TACCGAGGGAAT 181  
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QY 242 TTTATAGTTTCTGTGTTGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 301  
DB 242 TTTATAGTTTCTGTGTTGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 301  
QY 302 TAGAACTGTGAAACATTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 361  
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DB 422 GGCTAGAAACCGTATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 481  
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DB 542 TATTAATGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 601

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Db 782 CTCTTGAGAGTTCTGATCTTGCTTGCTTGCTTGCTTGCTTGCTTGCTTGCTTGCTTGCTTG 841  
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QY 1436 CTAGGAGTCACTACAGTATATTTTGAAGCAACCGTAGTGCAGATGTAACAATACCA 1495  
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Db 1613 GATCTGTTCTTTCTATGAGATTAACCTTCAACAACTTCTCTTCAAAAGTATACAGATTTA 1672  
QY 1676 GAGTTCTTATGCTGCTTCAACAAATGCTCTGAGGATTAAGTCTGAGAGGAGTACTA 1735

Db 1673 GAGTTAGATACGCTGCTTCTCAACTATGTTCTTAAAGTTACTGTTGAGATCTACTA 1732  
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QY 1856 GATTAATTAATATAGCAGGATGACAAAGCTTTCATTTGATTAATTAATGATTCATTC 1915  
Db 1853 CTATCTTAACACGCTGGAAGACAACTTTCATCTTCAACAGATTTGATTCATTC 1912  
QY 1916 TTACTGCAACCTTCAAGCAGAAATGATTTAGAAAGGCGCAAGAGCGGTGATGCTC 1975  
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QY 1976 TGTTTACTAATACGAATCCAAAGAGTTGAAAACAGATGTGACATTTATCATTTGATC 2035  
Db 1973 TGTTCATCTTCTCAATCAGATTTGGGCTCAAGCAGATGTGACTGATCATCATGATC 2032  
QY 2036 AAGTATCCAAATTTAGTGGGCTGTTTATCGAGTAATTTCTGTAGATGAAGAGAAAT 2095  
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 Db 3281 ACATTTCTGCAATCGAGATGAGATGAGATGAGATGAGATGAGATGAGATGAGATGAGATGAG 3340  
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 Qy 3527 AATATGACAGAGGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3586  
 Db 3401 AATCTAACAGAGGCTATGAGGACTACACCGTTTACAGCGGCTATGATGATGATGATGATGATGAT 3460  
 Qy 3587 TAGAATATCTTCCAGAAACCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3646  
 Db 3461 TAGAGTATCTTCCAGAAACCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3520  
 Qy 3647 TTATTTGATGACAGCGTGAATTTACTCTTATGAGAGAA 3684  
 Db 3521 TCAATTTGATGACGTTGAGATTTACTCTTATGAGAGAA 3558

## RESULT 6

US-09-988-462-6

Sequence 6, Application US/09988462

Publication No. US20030046726A1

GENERAL INFORMATION:

APPLICANT: Kozziel, Michael G.

Deesei, Najini M.

Lewis, Kelly S.

Kramer, Vance C.

Warren, Gregory W.

Evola, Stephen V.  
 Crossland, Lyle D.  
 Wright, Martha S.  
 Merlin, Ellis J.  
 Launis, Karen L.  
 TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
 INSECTICIDAL ACTIVITY IN MAIZE  
 NUMBER OF SEQUENCES: 94  
 CORRESPONDENCE ADDRESS:  
 ADDRESSER: Syngenta Biotechnology, Inc.  
 STREET: 3054 Cornwallis Road  
 CITY: Research Triangle Park  
 STATE: NC  
 COUNTRY: USA  
 ZIP: 27709  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: Patent in Release #1.0, Version #1.30  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/09/988,462  
 FILING DATE: 20-NO. US20030046726A1-2001  
 CLASSIFICATION: <Unknown>  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: US 09/547,422  
 FILING DATE: 11-APR-2000  
 APPLICATION NUMBER: US 08/459,504  
 FILING DATE: 02-JUN-1995  
 APPLICATION NUMBER: US 07/951,715  
 FILING DATE: 25-SEP-1992  
 APPLICATION NUMBER: US 07/772,027  
 FILING DATE: 04-OCT-1991  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Meigs, J. Timothy  
 REGISTRATION NUMBER: 38,241  
 REFERENCE/DOCKET NUMBER: S-188051  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: (919) 541-8587  
 TELEFAX: (919) 541-8689  
 INFORMATION FOR SEQ ID NO: 6:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 3624 base pairs  
 TYPE: nucleic acid  
 STRANDEDNESS: single  
 TOPOLOGY: linear  
 MOLECULE TYPE: other nucleic acid  
 DESCRIPTION: /desc = "Synthetic DNA"  
 HYPOTHETICAL: NO  
 FEATURE:  
 NAME/KEY: CDS  
 LOCATION: 1..3621  
 OTHER INFORMATION: /product= "Full-length, maize  
 optimized cry1B"  
 /note= "Disclosed in Figure 6."  
 SEQUENCE DESCRIPTION: SEQ ID NO: 6:  
 US-09-988-462-6  
 Query Match 40.6%; Score 1495.6; DB 10; Length 3624;  
 Best Local Similarity 63.7%; Pred. No. 0;  
 Matches 2310; Conservative 0; Mismatches 1299; Indels 15; Gaps 2;  
 Qy 79 ATGATCTATACACGATGCTGATTTGAGGATTTCTTGTGTATGACCGAGGGAATAT 138  
 Db 1 ATGAGACCTGCTGCCAGACCGCGCATGAGAGACGCTGTGCAATCCGCGAGGCAACAC 60  
 Qy 139 ATCAATCACTTGTATGCGGATCAAGATCAACGCGTATTAACAATAGCTGTAGATA 198  
 Db 61 ATGACCCCTGCTGTAGCGGACGACACCGTGTGACACCGGATCAACATCCGCGCCGATC 120  
 Qy 199 CTAGGTGTATGAGCGGATCCGTTGCTGTGACAAATAGCTTATATAGTTTCTTGT 258  
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QY 379 TTAGAGATTCTTTAGAGCTATCAACAGTCACTTGAAGATTGGCTAGAAAACGTGAT 438  
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## RESULT 7

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US-09-826-660-5
Sequence 5, Application US/09826660
Patent No. US20010026940A1
GENERAL INFORMATION:
APPLICANT: Cardineau, Guy A.
APPLICANT: Steiman, Steven J.
TITLE OF INVENTION: Plant-Optimized Genes Encoding Pesticidal Toxins
FILE REFERENCE: MA-714XC2D1
CURRENT APPLICATION NUMBER: US/09/826,660
PRIOR FILING DATE: 2001-04-05
PRIOR APPLICATION NUMBER: 09/178,252
PRIOR FILING DATE: 1998-10-23
PRIOR APPLICATION NUMBER: 60/065,215
PRIOR FILING DATE: 1997-11-12
PRIOR APPLICATION NUMBER: 60/076,445
NUMBER OF SEQ ID NOS: 27
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 3522
TYPE: DNA
ORGANISM: Bacillus thuringiensis
US-09-826-660-5

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Query Match      38.2%; Score 1408.4; DB 9; Length 3522;
Best Local Similarity 65.7%; Pred. No. 0;
Matches 2243; Conservative 0; Mismatches 1061; Indels 108; Gaps 9;

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QY 2202 TGAGCAATGAAATTCACATCTATCCATGAAATCTGAACATGATGTGGGAAATGA 2261  
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QY 2682 CGTGTGGGTGATTAAGGATTAAGACGAGGAAGGTCAATGCAAGCTAGGGAATCTGA 2741  
DB 2511 TGTATGGGTGATTTTAAAGATTAAGACGAGATGCGCATGCAAGCTAGGAAATCTAGA 2570  
QY 2742 ATTTATGGAAGAAACATTAATTAAGAAAGCACTGTCTCGTGAAGAGACAGAA 2801  
DB 2571 GTTTCTGAAGAAACATTTAGTGGGGAAGCACTAGCTCGTGAAGAAAGACAGAA 2630  
QY 2802 AAAATGAGAGCAAACTGGAAGAACTCAATTTGGAACAAACGATATATCAAGGCG 2861  
DB 2631 AAAATGAGAGATTAAGCTGGAAGAAATTTGGAACAAATATTTATTAAGAGGCG 2690  
QY 2862 AAAAGAGCTGTGGAATCTTTATTTGTAGTTCTCAATATTAATGATTAAGAGCGGATAC 2921







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DB 3291 TTCTGTACCACTGATATGCTGATGCTATGAAAGAAAGAACTATACAGATGTAAG 3350  
QY 3513 AGATTAATCATTTGTAATATGAGAGGTAATGTAATTTATCCACTTACACTGCTGTA 3572  
DB 3351 AGACATTCCTGTGATCTAAGAGAGATATGAGGATTTACACACTTACACTGCTGTA 3410  
QY 3573 TATGACAAAAGAAATTAAGATATCTCCAGAAACGATATGATGATGATGATGAGA 3632  
DB 3411 TGTGACAAAAGAAATTAAGATATCTCCAGAAACGATATGATGATGATGAGA 3470  
QY 3633 AACGAAAGGAAATTTATTTGTATGACAGCGTGAATTAATCTCTTATGAGAGA 3684  
DB 3471 AACGAAAGGAAATTTATTTGTATGACAGCGTGAATTAATCTCTTATGAGAGA 3522

## RESULT 9

US-10-825-751-7  
Sequence 7, Application US/10825751  
Publication No. US20040194165A1  
GENERAL INFORMATION:  
APPLICANT: Payne, Jewel  
APPLICANT: Sick, August J.  
TITLE OF INVENTION: Novel *Bacillus thuringiensis* Isolate Active Against Lepidopteran  
FILE REFERENCE: MA-43CDP2D4  
CURRENT APPLICATION NUMBER: US/10/825,751  
CURRENT FILING DATE: 2004-04-16  
PRIOR APPLICATION NUMBER: US 09/837,961  
PRIOR FILING DATE: 2001-04-19  
PRIOR APPLICATION NUMBER: US 09/521,344  
PRIOR FILING DATE: 2000-03-09  
PRIOR APPLICATION NUMBER: US 08/933,891  
PRIOR FILING DATE: 1997-09-19  
PRIOR APPLICATION NUMBER: US 08/356,034  
PRIOR FILING DATE: 1994-12-14  
PRIOR APPLICATION NUMBER: US 08/210,110  
PRIOR FILING DATE: 1994-03-17  
PRIOR APPLICATION NUMBER: US 07/865,168  
PRIOR FILING DATE: 1992-04-09  
PRIOR APPLICATION NUMBER: US 07/451,261  
PRIOR FILING DATE: 1989-12-14  
PRIOR APPLICATION NUMBER: US 371,955  
PRIOR FILING DATE: 1989-06-27  
NUMBER OF SEQ ID NOS: 10  
SOFTWARE: Patent in version 3.2  
SEQ ID NO 7  
LENGTH: 3522  
TYPE: DNA  
ORGANISM: *Bacillus thuringiensis*  
US-10-825-751-7

Query Match 38.2%; Score 1408.4; DB 18; Length 3522;  
Best Local Similarity 65.7%; Pred. No. 0;  
Matches 2243; Conservative 0; Mismatches 1061; Indels 108; Gaps 9;

QY 285 TCAGTGGAAATTTCTCTGAGACATGTCGAAACAATTAATCAACAATTAACAGAAA 344  
DB 207 TGAATGAGCTTATTTCTTTTACAGATTCGAAACAATTAATGAGCAAAATTAACAACTT 266

QY 345 TGTAGGAATACGGCACTTGCTGATTAACAAGTTTAAAGAGATTCCTTAAAGCCTATCA 404  
DB 267 GGAAGGAACCGGGCAATTAATCAATTAACAGAGGTTAGACATATGATTAATTAATAT 326  
QY 405 AAGATCCTTGAAGATTTGGCTAGAAAACCGTATGATGACAAAGAACGAAAGTGTCTTA 464  
DB 327 TGAAGCACTAAGAGAGTGGAGAAATTCCTTAATTAAGCAATTAATTAAGGAAGATGCG 386  
QY 465 TACCAATATATAGCCTTAAAGCTTGAATCTTAAATGAGATGCGCTTTTGGCAATTA 524  
DB 387 TATTCGATTTGCTAATACAGACAGCTTATTAACAGCAATTAATTAATTTTACACTTAC 446  
QY 525 AAACGAAGAGTTCATTAATTAATGATATGCTCAAGCTGCAATTAACCTATTAAT 584  
DB 447 AAGTTTGAATCCCTCTTTATGCTATGATGCTATGATGCTCAAGCTGCAATTAACCT 506  
QY 585 ATTGAGATGCTCTCTTTTGTGATGATGATTTGGCTTACATGCAAGAAATTCACAG 644  
DB 507 ATTAAAGAGCGCTGATCGTTTGGGAGGTTGGGAGCTGATATTAATTAATTAATTA 566  
QY 645 TTAATTAAGAGCGCAAGTGGAAACAAGAGATTAATTCGACTAATGCGTAAGATGTA 704  
DB 567 TCAATTAATTAAGATTAATTAATCTTATTAATTAATTAATTAATTAATTAATTAAT 626  
QY 705 TAAATCAAGATCTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 764  
DB 627 CAATCAAGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 686  
QY 765 ATTCCGTAGAGATCTAAGCTTGAAGGATTAATTAATTAATTAATTAATTAATTAAT 824  
DB 687 GTTTAGAGAGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 746  
QY 825 CACTGCACTTATCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 884  
DB 747 TGTAGGAACATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 806  
QY 885 AATTTGAGCAAGGGGTAAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 944  
DB 807 AGTAATTAAGAGATTCCTCAAGTTCTGC-----TAATTAATTAATTAATTAATTA 845  
QY 945 GTTTTCCGTATTAAGAGATTCCTCAAGTTCTGC-----TAATTAATTAATTAATTA 1004  
DB 846 TGTGTTAATTAAGAGATTCCTCAAGTTCTGC-----TAATTAATTAATTAATTAAT 902  
QY 1005 ACTTAATTTTAAAGATTCCTCAAGTTCTGC-----TAATTAATTAATTAATTAAT 1064  
DB 903 -----TTCTTTGTTTAACTGCAAGATTCCTCAAGTTCTGC-----TAATTAATTA 953  
QY 1065 GGGGCAACAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1124  
DB 954 ACACTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1013  
QY 1125 TACCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1184  
DB 1014 CTTCAATTCCTGAGGAGATTCCTCAAGTTCTGC-----TAATTAATTAATTAATTA 1073  
QY 1185 TGAATCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1244  
DB 1074 ATTATCAATTCCTGAGGAGATTCCTCAAGTTCTGC-----TAATTAATTAATTAAT 1127  
QY 1245 TACTTGAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1304  
DB 1128 GGGGCTTAAGGAGATTCCTCAAGTTCTGC-----TAATTAATTAATTAATTAATTA 1187  
QY 1305 TACTCAACCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1364  
DB 1188 TACTGAGACCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1246  
QY 1365 AGAAACAAGAGAGATTCCTCAAGTTCTGC-----TAATTAATTAATTAATTAATTA 1424  
DB 1247 GGAATGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1306

QY 1425 CATTTCACATCTAGGGTCANGTACAGTATATCTTGGACGCACCGTAGTCAGATCG 1484  
DB 1307 CAGGAAGTATCTATGAG--AGCTCCAAATGTTTTCTTGGACGCACCGTAGTCAGATCG 1364  
QY 1485 TACAAATACCATTAGTTCAGATGCAATACAAATACCATTTGGTAAATCATCAACCT 1544  
DB 1365 TACAAATACAAATGATTCGGAGAGATTAATCAAAATACATTTGGTAAAGCAATACACT 1424  
QY 1545 TAATTCAGGTACTCTGTAGTCAATGAGCCCAAGATTTACAGAGGGATTAATACCAAC 1604  
DB 1425 TCAGTACAGGTACTCTGTGTAGAGGGCCCGGTTTACGGAGAGATATCTTTGGAG 1484  
QY 1605 TAACTTAAATGTAGTGTACTAATGATGGCTTTAAATTTAATATACATCATTAAGCG 1664  
DB 1485 AACCAATGAGAGGACATTTGCTTATCTATTTGTTAATATTAATGGCCAAATTCACCAAG 1544  
QY 1665 GATTCGCGTGAAGTTCGTTATGCTGCTTCTCAACAAATGCTCTGAGGTACCTGCG 1724  
DB 1545 GATTCGTCAGAAATAGCTATGCTCTACTACAAATCTAAGAAATTAAGCTAACGGTTGC 1604  
QY 1725 AGGAGTACTACTTTTGTATCAAGATTCCTAGTACTATGATGCAATGAGTCTTGGAC 1784  
DB 1605 AGGTGAACGATTTTGTCTGTGCAATTTAACAAGAAATGATACCGGTGACCATTAAC 1664  
QY 1785 ATCTCAATCATTTAGATTGGACAAATTTCTGTAGGTATTAGTCAATCTGGCAGTCAAC 1844  
DB 1665 ATTCCAATCTTTAGTTTACGCAACTATTTAATACAGCTTTTACATCCCAATGAGCCAGAG 1724  
QY 1845 TCGT---GGAATAAGTATAGTAAATATGACAGTACCAACGTTTCACTTTGATTAAT 1901  
DB 1725 TAGTTTCAAGTAGGTGCTGATCTTTTAGTTCAGGGAATGAAGTTTATATACAGATTT 1784  
QY 1902 TGAATTCATTTCAATTTATCTGCAACTTCGAAAGCAATACGATTTAGAAAGGCGCAAG 1961  
DB 1785 TGAATTTGATTCAGTTACTGCAACTTTGAGAGCAATATGATTTGAAAGACACAAAG 1844  
QY 1962 GCGGTGATGCTCTGTTTCTAATACGAATCCAGAAAGTGAAGAAACAGATGTACAGA 2021  
DB 1845 GCGGTGAAATGCGCTGTTTCTTATTAACCAAAATAGGATTAAGAAACAGATGTACAGA 1904  
QY 2022 TTAATCATTTGATCAAGTATCCAAATTTAGTGGGTGTTTACGAGTGAATTTCTGTTAG 2081  
DB 1905 TTAATCATTTGATCAAGTATCCAAATTTAGTGAATTTGTTATCAAGTGAATTTTGTCTGGA 1964  
QY 2082 TGAAGAGAGAAATTAATTTGAGAAAGTGAATATGCGAAACGACTAGTATGAAGAA 2141  
DB 1965 TGAAGAGCGAATTTGTCGAGAAAGTCAAAACATGCGAAGCAGTCACTGATAGAGGAA 2024  
QY 2142 CTTAATCTCAAGATCCAACTTCACATCATCAATTAAGCAACAGACTTCAATCTACTAA 2201  
DB 2025 TTTACTTCAAGATCCAACTTCAAAGGATCAATAGGCAACTAGAC----- 2070  
QY 2202 TGAGCAATCGAATTTCACTATCTATCCATGAACATCTGAACATGAGTGTGGGAAAGTGA 2261  
DB 2071 -----CGTGTGTGGAGAGAGATAC 2090  
QY 2262 GAACATTTACATCCAGAGAGAAATGACGTATTTAAAGAAATTAACCTCACACTACCGGG 2321  
DB 2091 GGAATTTACATCCAAAGAGAGATGACGTATTTCAAGAAATTAATGTCTCACATCAAGG 2150  
QY 2322 GACTTTTAAATGAGTGTATCCGACGTATTTATATCAAAAAATAGAGAGTCCGAATTA 2381  
DB 2151 TACTTTTGAATGAGTGTATCCAAAGTATTTATATCAAAAAATAGATGATGCAAAATTA 2210  
QY 2382 AGCTTATATCTCGTCAACCAATTAAGAGGTATATTTGAAGTATGCAAAATTTAGAGATTA 2441  
DB 2211 ACCCTAATACCTGTTATATTAAGAGGTATATTCGAGAGATGCAAACTTGAAGATCTA 2270  
QY 2442 TTTGATTCGTTAATATCGAAACATGAACATTTGATGTTCCAGGTCCGAGTCCGATG 2501  
DB 2271 TTTGATTCGCTATATATCGAAACAGAAACGTAATATGTCTAGATTCGGGTCTTTATG 2330  
QY 2502 GCCGCTTTAGTTGAAGCCCAATCGAAGGTGCGAGAAACGAATGATGCGCACCA 2561

DB 2331 GCCGCTTTAGTCCAAAGTCCATCAAGAAAGTGTGAAGAACGAATGATGCGGCACCA 2390  
QY 2562 TTTTGAATGGAATCTGATCTGATGATTTCTTCGACAGATGAGAAATATGTCGATCA 2621  
DB 2391 CCTGAATGGAATCTGATCTGATGATTTCTTCGACAGAGACGGGAAATATGTCATCA 2450  
QY 2622 TTCCCATCAATTTCTCTTGGATTTGATATTTGATGCAACAGACTTCATGAGATCTAG 2681  
DB 2451 TTGCGATCATTTCTCTTGGACATTTGATGATGATGATGATGATGATGATGATGATG 2510  
QY 2682 CGTGTGGGTGATTCAGAAATTAAGCGAGAGGTCATGCAAGACTGAGGAATCTGGA 2741  
DB 2511 TGTATGGGTGATTTCAAGATTAAGCGAGATGCGATGCGATGCAAGCTAGGAATCTAGA 2570  
QY 2742 ATTTATTTGAAGAAACCAATTAATGAGAGACCTGCTCGTGTGAAGAGACAGAGAA 2801  
DB 2571 GTTTCTCGAAGAGAAACCAATTTAGTGGGAGACGATAGCTCGTGTGAAGAGACAGAA 2630  
QY 2802 AAAATGAGAGACAAACGTGAAGAACTCAATTTGAAACAAACGAGTATATCAAGGC 2861  
DB 2631 AAAATGAGAGATTAACGTGAAGAAATTTGAAACAAATATTTGTTATTAAGAGGC 2690  
QY 2862 AAAAGAGCTGTGAGTCTTATTTGATGATCTCAATTAATGATTAAGAGGATAC 2921  
DB 2691 AAAAGATCTGATGATGCTTTATTTGTAATCTCAATATGATCAATACAGCGATAC 2750  
QY 2922 AAAATTTGACATGATTCATGCGGACAGATTAACCTTTGTCATCGAATTCGAGAGCTTATCT 2981  
DB 2751 GAATATGCGATGATTTCAAGCGGACAGATTAACGATGCTTATGAATTCGGAGACGATCT 2810  
QY 2982 GTCAAGATATCTGTTATCCCGGTGTAAATGCGGAAATTTTGAAGATTAAGAGTGC 3041  
DB 2811 TCCAGAGTATCTGTGATTTCCGGGTGTAAATGATGACATTTTCGAAAGATTAAGAGCGC 2870  
QY 3042 CATTATCACTGGAATCTCCCTATAGATGCGGAATGCGTTAAATGATGATTTAA 3101  
DB 2871 TATTTTCACTGCAATTTCTCTATATGATGCGAAGAAATGATTAAGAAACGATATTTCA 2930  
QY 3102 TAAATGATTTAGCATGCTGGAATGTAAAGGCACTGATAGT---ACAAACAGACCATCA 3158  
DB 2931 TAAATGCTTATCATGCTGGAACGTGAAGGCACTGATGATGATGAAGAAACAAACCA 2990  
QY 3159 CGGTCTGTCTCTTGTATTCAGAAATGGAAGCAAGTGTCAACAGACTTCCGCTCTG 3218  
DB 2991 CGGTCTGTCTCTTGTATTCAGAAATGGAAGCAAGTGTCAACAGACTTCCGCTCTG 3050  
QY 3219 TCCGGGCGTGGCTATATCTCCGTGTCAAGGCTCAAGAGAGGATATGAGAGGTTG 3278  
DB 3051 TCCGGGTGCTGCTATATCTCTGTGTCAAGGCTCAAGAGAGGATATGAGAGGTTG 3110  
QY 3279 TGTATGATTCATGAAATCGAGAACATACAGACGAATTAATTAAGAACTGTGAAGA 3338  
DB 3111 CGTAACTTCATGATGATGAGAAACATACAGACGAATGAACTTTAGCAACTGCGTGA 3170  
QY 3339 AGAGAAAGTGTATCCACGGAATACAGAAACGTGTATGATTTATCTGACACCAAGTAC 3398  
DB 3171 AGAGAAAGTGTATCCACCAACAGGTAACGTGTATGATTTATCTGCAATACAGAAAGA 3330  
QY 3399 A-----GCAATATGTAATTCCTGTAATGCTGGAATGAGAGTGAATGATG 3452  
DB 3231 ATACGGGGGTGCTACATCTCCGTATGCTGATATGAGAACTTATGAGAGCAATTC 3290  
QY 3453 TACAGCATCTGTTAATTTAACAACGACTTATGAGAAAGAAACGTATATCAGATGTACAG 3512  
DB 3291 TTTCTGTACAGCTGATTTATGCGTCACTATGAGAAAGAAATCTATATACATGAGACAG 3350  
QY 3513 AGATTAATCTTGTGAATATGACAGAGGATATGGAATTTATCCACCACTACCAAGTGTGA 3572  
DB 3351 AGCAATATCTTGTGAATATTAACAGAGATATGAGGATTTACACCACTACCAAGTGTGA 3410  
QY 3573 TATGACAAAAGATTTGAAATATCTTCCCAAGAAACCGATTAAGTATGATTTGAGATTG 3632

Db 3411 TGTGACAAAAGATTAGATCTTCCGAAACCGATAGGTATGATGATCGGAA 3470  
Qy 3633 AACGGAAGGAGATTATTTGAGACGCGTGAATTACTCTTATGAGGAA 3684  
Db 3471 AACGGAAGGAGATTATTTGAGACGCGTGAATTACTCTTATGAGGAA 3522

RESULT 10  
US-09-873-25  
Sequence 25, Application US/09873873  
Patent No. US20020064865A1  
GENERAL INFORMATION:  
Applicant: Malvar, Thomas  
Applicant: Gilmer, Amy Jelen  
Title Of Invention: Polynucleotide Compositions Encoding Broad-Spectrum S-Endotoxins  
File Reference: MECO:210--2  
Current Application Number: US/09/873, 873  
Current Filing Date: 2001-08-20  
Prior Application Number: US 09/253,341  
Prior Filing Date: 1999-02-19  
Prior Application Number: US 08/922,505  
Prior Filing Date: 1997-09-03  
Prior Application Number: US 08/754,490  
Prior Filing Date: 1996-11-20  
Number Of SEQ ID NOS: 35  
Software: PatentIn Version 3.0  
SEQ ID NO 25  
LENGTH: 3534  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Hybrid Delta-Endotoxin  
NAME/KEY: CDS  
LOCATION: (1)..(3531)  
US-09-873-873-25

Query Match 38.0%; Score 1402; DB 9; Length 3534;  
Best Local Similarity 65.7%; Pred. No. 0;  
Matches 2243; Conservative 0; Mismatches 1070; Indels 99; Gaps 10;

Qy 285 TCAGTGGGAATTTTCTTAGAACGTGCAACCACTTAAATCAACAATTAACGAAA 344  
Db 213 TCATGAGGAGCGATTTCTTATCAAAATTAAGTAAATTAACCAAGATTAAGAAATT 272  
Qy 345 TGTGAGATACGCACTTCTGATTAACAAGTTTGAAGATTCCTTAGAGCTATCA 404  
Db 273 CGTTAGAACCAAGCCATTTCTAGATTAAGAGACTAAGCAATTTATCAATTTACG 332  
Qy 405 ACAGTCACTGAAGATTGCTAGAAAACGTGATGATGCAAGAACGAAGTCTTTA 464  
Db 333 AGAATCTTTAGAGAGTGGAGAGACATCTACTAATCAAGCATTAAGAGAGATGCG 332  
Qy 465 TACCAATATATAGCTTAGAATCTGATTTTCTTAATGCAATGCGCTTTTCCGATTAG 524  
Db 393 TATTCATTCATGACATGACATGACGTCCCTTACCAACCGCTATTCCTTTTGGAGTTCA 452  
Qy 525 AACCAAGAGTTCCATTATTAATGTAATGCTCAAGTCGCAAAATTTACACCTATTAT 584  
Db 453 AATTTATCAAGTCTCTTTTATCAAGTATATGTTCAAGTCGCAAAATTTACATTTATAGT 512  
Qy 585 ATTAGAGATGCTCTCTTTTGGTATGTAATTTGGCTTACATCGCAGGAAATTCACG 644  
Db 513 TTTGAGAGATGTTTCAAGTGTTTGGAACAAAGTGGGATTTGATGCCGCACTATCAATAG 572  
Qy 645 TTAATATGAGCGCAAGTGAACAAAGAGATTAATCCGACTATTTGCGTAAATGTA 704  
Db 573 TCGTATTAAGATTTAATCTAGGCTTATGCACTAATACAGATCATCTGTACGCTGTA 632  
Qy 705 TAATACGCTCTAAATGCTTGAAGGAGCAAAATCCGCAAGTTGGGTGCTTATATCA 764  
Db 633 CAATACGAGATTAAGAGCGTATAGGAGCCGATTTAGAGATTTGAATGAATTAATCA 692  
Qy 765 ATTCGATAGATCTAAGCTTAGGGGTATTAATCTAGTGGCACTATTCGAAGCTATGA 824

Db 693 ATTAGAGAGATTAACACTTAATGATTAATGATGTTCTTATTTCCGAATGAA 752  
Qy 825 CACTCGACTTATCAATTAATAAGAGTCTAGTTAAAGGAAAGTTTATAGACGC 884  
Db 753 TAGTAGAAGTATTCATTTGGAACAGTTTCCCAATTAACAGAAATTTATCAAAACC 812  
Qy 885 A-ATTGAGCAACAGGGGTAAATATGGAAGATTAATGTTATTAATATATGCACT 942  
Db 813 AGTATTAAGAAATTTTATGATGATGTTTCAAGGCTCGGCTCAGGGCATAGAAAGATAT 872  
Qy 943 TCGTTTCCGCTATAGAGATCGCGTTATCCGAAGCCCGCATCTACTGATTTCTAGAA 1002  
Db 873 TAGAGTCCACATTATTAATTAATTAATCAATTAATCAATTAATCAATTAATCAATTA 932  
Qy 1003 CAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1062  
Db 933 GGGTATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 983  
Qy 1063 CGGGGAGCAAAATTCATTCGCGCAATAGAGCGGATTAATTAATTAATTAATTAATTAAT 1122  
Db 984 TTGGGGGAGCAAAATTCATTCGCGCAATAGAGCGGATTAATTAATTAATTAATTAATTAAT 1032  
Qy 1123 TCTACCAATCTCTATTAATCTCTATAGATTAATTAATTAATTAATTAATTAATTAATTA 1182  
Db 1033 GCTCCACAAACAGATTAATGTTGCTCACTAGTCAAGGCGGTATTAATTAATTAATTAATTA 1092  
Qy 1183 ACTGAATCATATGAGAGGCTTCTATGAGGAAATTAATTAATTAATTAATTAATTAATTAATTA 1242  
Db 1093 ACTTATATTAAGAACTTTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1152  
Qy 1243 CTTACTGTTAGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1302  
Db 1153 GGGAC----AGATTTGCTTATAGAACTCTCTCAAAATTTGCGCATCGCTGTATACAGAAA 1208  
Qy 1303 TATATGCAACCTATAGATCACTGGGCTTCAATTAATTAATTAATTAATTAATTAATTAATTA 1361  
Db 1209 AACGGAACCGTATGATTCGCTGATGAATTAACGCGCAAAATTAATTAATTAATTAATTAAT 1268  
Qy 1362 ACCGAAACCAACGAACCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1421  
Db 1269 GCAAGATTTATGATCATGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1322  
Qy 1422 GCTCATTTCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1481  
Db 1323 TAATATAGTATAGTATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1382  
Qy 1482 TCGTACAAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1541  
Db 1383 CCTACAAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1442  
Qy 1542 CTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1601  
Db 1443 ACTTCAGTCAAGTATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1502  
Qy 1602 AACTTAAGTATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1661  
Db 1503 ACGAACAAGTGAAGGACATTTGCTTATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1562  
Qy 1662 GCGGTATCGGTGAGAGTGTGATATGCTGCTTCAACCAATGATGCTGAGGATTAATTAATTAAT 1721  
Db 1563 AAGGTATCGGTGAGAGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1682  
Qy 1722 CGAGGAGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1781  
Db 1623 TGCAGGTGAACGATTTTGTCTGCTCAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1842  
Qy 1782 GACATCTCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1841  
Db 1683 AACATTCATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 1742  
Qy 1842 AACTGCT---GGAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1898



Dp	1743	GAGTAGTTTCCACAGTAGGTGCTGATACCTTTTAGTTACGGGAATGAAGTTTATATAGACG	1802
Qy	1899	AATTGAATTCATCTCCAAATTAATCTGCAACCTTGAAAGCAGATATACATTTAGAAAGGCGCA	1958
Dp	1803	ATTGGAATTTGATTCGAGTTACTGCAACAATTGGAAGCAGAAATATGATTTAGAAAGACACA	1862
Qy	1959	AGAGCGCGGTGAATGCTGCTGTTTACTTAATACGAATCCAGAAAGATTTGAAAACAGATGAC	2018
Dp	1863	AAAGCGGTGATGGCTGCTTTACTCTATTAACCAATATAGGATTAATAAACAGATGTGAC	1922
Qy	2019	AGATTATCATATTGATTCAGATATCCAAATTTAGTGGCGTATTATCCGATGTAATCTGCTT	2078
Dp	1923	GGATTATCATATTGATTCAGATATCCAAATTTAGTGGATTTGTTTATCAGATGAATTTTGCT	1982
Qy	2079	AGATGAATAAGAGAGAAATTAATTGAGAAAGTGAATAATGCGAAAGCACTCAGTGTGAAG	2138
Dp	1983	GGATGAATAAGCGAAGATTTGTCGAGAAAGTCAAACATGCGAAAGCACTCAGTGTGAAG	2042
Qy	2139	AAACTTACTCCAAAGATCCAACTTCACATCATATAGAACACAGACTTCATATCTAC	2198
Dp	2043	GAAATTAATCTCAAGATCCAACTTCAAAGGATCAATAGGCACTAGC-----	2091
Qy	2199	TAATGAGCAATCGAATTTCACTATATCATGAACAATCTGAATGGAATGGTGGGAG	2258
Dp	2092	-----GCTGGTTGGAAGAGAG	2108
Qy	2259	TGAGAACATTAACAATCCAGAGAGAAATGACGTATTTAAAGAGATTAAGTCACACTACC	2318
Dp	2109	TACGGAATTTACATCCAAAGAGGAGATGACGTATTCAAAGAAATTAATGTCACTATCC	2168
Qy	2319	GGGACCTTTATATGAGTGTATTCGACGTATTTATATCAAAAAATAGAGAGTGGGAAT	2378
Dp	2169	AGATACCTTTATGATGATGCTATCCAACTATTTGATATCAAAAAATCGATGATCAAAAT	2228
Qy	2379	AAAAGCTTATCTGCTACCAATTAAGAGGATATTTGAAGATATGCAAGTTTAGAT	2438
Dp	2229	AAAAGCTTTACCGGTATTCATATTAAGGGGTATATCGAATATGTCAAGCTTAGAAAT	2288
Qy	2439	ATATTGTATTCGTTATTAATGCGAAACATGAACAATGTGATGTTCCAGTACCGAGTCCGT	2498
Dp	2289	CTATTTAATTCGCTACCAATGCAAAACATGAACAGTAAATGTGCAAGTACGGGTTCTT	2348
Qy	2499	ATGGCGCTTTCAGTTGAAGCCCAATCGAAGGTGCGAGAACCGAATCGATCGCAC	2558
Dp	2349	ATGGCGCTTTCAGCCCAAGTCCAAATCGGAAAGTGGAGAGCCGAATCGATCGCGCC	2408
Qy	2559	ACATTTTGAATGGAATCCTGATCTTAGATTTGTTCTGCGAGATATGAGAAAAATGTGCGCA	2618
Dp	2409	ACACCTTGAATGGAATCCTGACTTAGATTTGTTCTGTTAGGATATGAGAAAAATGTGCCA	2468
Qy	2619	TCATTCGCATATTTCTTTGGAATATTTGATATTTGATGTCACAGACTTGATGGAATCT	2678
Dp	2469	TCATTCGCATATTTCTTCCTTAGACATTTGATGTATGAGATGTACAGACTTAAATGAGACT	2528
Qy	2739	GGAATTTATGGAAGAAAAACAATTATGAGAGACACTGTCTGTGTGAAGAGACAGA	2798
Dp	2589	AGAGTTTCTCAGAGAAAAACAATTATGAGAGAGCGCTACTGCTGTGAAGAAACGCGGA	2648
Qy	2799	GAAAAAATGAGAGACAAACGTGAATACTCAATTGGAAACAAACGAGTATATACGA	2858
Dp	2649	GAAAAAATGAGAGACAAACGTGAATACTCAATTGGAAACAAATATCGTTTATTAAGA	2708
Qy	2859	GGAAGAAAGCTGTGATGCTTTATTTGTAGATTTCAATATATATAGATATACAGCGGA	2918
Dp	2709	GGAAGAAAGATCTGTAGATGCTTTATTTGTAACTCTCAATATATATCAATTACAAAGCGGA	2768
Qy	2919	TACAAACATTCGACATGATTCATGCGGACGATTAACCTTTTCATCGAATTCGAGAGCTTA	2978
Dp	2769	TACGAATATTCACATGATTCATGCGGACGATTAACCTTTTCATGACATTCGAGAGCTTA	2828

Qy	2979	TCGTGCAAAATTA	CTGTGTATCCCGGGGTAAATGCGGAATTTTGTGAAGATTGGAAG	3038
Db	2829	TCCTCCGAGGTG	TCCTGTGATTCGGGGTGTCAATGCGGCTATTTTGTGAAGATTGGAAG	2888
Qy	3039	TCGATTAATCACTGCAATCTCCCTATACGATGCGAGAAATGTCGTTAAAAATGCGATTT		3098
Db	2889	GCGATTTTTCACCTGCATCTTCCCTATATGATGCGAGAAATGTCATTTAAAAATGCGATTT		2948
Qy	3099	TAATTAATGATTAGCATGCTGGAATGTAAAGGCGATGTAGATGT--ACAACAGAGCCA		3155
Db	2949	TAATTAATGCGTTATCTGCTGGAACGTGAAGGGCATGTAGATGTAGAAGAACAAACAA		3008
Qy	3156	TCACCGTTCGTCTCTGTATTCCAGAAATGGGAAGCGAATGTGCACAGACGTTCCGCT		3215
Db	3009	CCAAAGTTCGCTCTGTGTGTTTCCGGAATGGGAAGCGAATGTGCACAGAAATTCGCT		3068
Qy	3216	CTGTCGCCGGGGGTGGCTATATCTCCGTGTACACGCGTACAAAGAGGATATGAGAGGG		3275
Db	3069	CTGTCGCCGGGTGTGGCTATATCTTCGTGTACACGCGTACAAAGAGGATATGAGAGGG		3128
Qy	3276	TTGTGTAAACGATCCATGMAATCGAAGCAATACAGACGACTAAAATTTAAAACTGTGA		3335
Db	3129	TTGGGTAAACATTCATGATGATCGAAGCAATACAGACGACTGAAGTTAGCACTGCGT		3188
Qy	3336	AGAAAGAGGAATGTATCCAAAGGATACAGAAACGCTGTAATGATTAATACGACACCAAG		3395
Db	3189	AGAAAGAGGAATCTATCCAAATTAACGCTAACGCTGATATGATTAATGATTAATCAAGA		3248
Qy	3396	TACAGCAGTATGTATTTCCCGTAAATGCTGTATGAGAGTCAATGAAATGTTAGTACTAC		3455
Db	3249	AGAAATAGAGAGGTGCGT-----ACACTTCGTATGAGAGATTAACGAAGCTCTTTC		3302
Qy	3456	AGCATCTGTTAATTAACAAACCGACTTATGAAAGAAACGTTATACAGTGTATCGAAGAGA		3515
Db	3303	CGTACACGCTGATTTATGCGTACGTCTATGAAAGAAAAACGTTATACAGATGACGAAGAGA		3362
Qy	3516	TAAATCATTTGTAATGTACAGAGGGTATGTAAATTTATCACACATACAGACGCTTATAT		3575
Db	3363	GAAATCTTTGTAAATTTAACAGAGGATATGAGATTAACGCGCATACAGAGTTGTTATGT		3422
Qy	3576	GACAAAAGATTAGATTAATCTTCCAGAAACCGATTAAGGTATGATTGATTTGGAAGAAC		3635
Db	3423	GACAAAAGATTAGATTAATCTTCCAGAAACCGATTAAGGTATGATTGATTTGGAAGAAC		3482
Qy	3636	GGAAGGGAAGTTTATTTGTAGACAGCGTGGAAATTACTCTTATGAGAGGAATAG		3687
Db	3483	GGAAGGGAACATTTATCTGTGACAGCGTGGAAATTACTCTTATGAGAGGAATAG		3534
RESULT 11				
US-09-916-956A-25				
/ Sequence 25, Application US/09916956A				
/ Publication No. US2003001757A1				
/ GENERAL INFORMATION:				
/ APPLICANT: Gilmey, Amy Jelen				
/ APPLICANT: Malvar, Thomas				
/ TITLE OF INVENTION: Polynucleotide Compositions Encoding Broad-Spectrum S-Endotoxins				
/ FILE REFERENCE: MECO:211--1				
/ CURRENT APPLICATION NUMBER: US/09/916,956A				
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/ PRIOR APPLICATION NUMBER: US 09/253,331				
/ PRIOR FILING DATE: 1999-02-19				
/ PRIOR APPLICATION NUMBER: US 08/922,505				
/ PRIOR FILING DATE: 1997-09-03				
/ PRIOR APPLICATION NUMBER: US 08/754,490				
/ PRIOR FILING DATE: 1996-11-20				
/ NUMBER OF SEQ ID NOS: 35				
/ SOFTWARE: PatentIn version 3.0				
/ SEQ ID NO 25				
/ LENGTH: 3534				
/ TYPE: DNA				
/ ORGANISM: Artificial Sequence				



FEATURE:  
OTHER INFORMATION: Hybrid Delta-Endotoxin  
NAME/KEY: CDS  
LOCATION: (1) .. (3531)  
US-09-916-956A-25

Query Match 38.0%; Score 1402; DB 10; Length 3534;  
Best Local Similarity 65.7%; Pred. No. 0;  
Matches 2243; Conservative 0; Mismatches 1070; Indels 99; Gaps 10;

QY 285 TCAGTGGAAATTTTCTAGAACATGCGAACATTAATATCAATTAACAGAAA 344  
DB 213 TCATGGGAGCGATTTCTGTGCAAAATGGAACAGTTAATTAACCAAGAAATAGAAATT 272  
QY 345 TGTGAGAAATACGCGACTTCTCGATTACAGGTTTAGAGATTCTTTAGACCTATCA 404  
DB 273 CGCTAGGAACCAAGCCATTTCTAGATTAGAGGCTAGCAATCTTTATCAAAATTTAGC 332  
QY 405 ACAATCACTTGAAGTTGGCTAGAAAACGCTATGATGCAAGAACAGAAAGTTCTTTA 464  
DB 333 AGAATCTTTAGAGAGTGGAGACAGATCTCTAATCCAGCATTAAGAGAGAGATGCG 392  
QY 465 TACCAATATATAGCCTTAGAATTTTCTTAATGAGATGCGCTTTTGGCAATTAG 524  
DB 393 TATTCATTTCAATGACATGAAACAGTCCCTTACACCGCTATTCCTTTTGGAGTTCA 452  
QY 525 AAACCAAGAGTTCAATTATTAATGATATGCTCAAGTCAAGTCAAAATTTACACTATATT 584  
DB 453 AAATTAATCAAGTTCTCTTTTATCAGTATATGTTCAAGCTGCAAAATTTATCATCAGT 512  
QY 585 ATTGAGAGATGCTCTCTTTTGGTATGAAATTTGGCTTACATCGCAGAAATTCACG 644  
DB 513 TTGAGAGATGTTCAAGTGTGTTGACAAAGTGGGGATTGATGCCGCACTATCAATAG 572  
QY 645 TTATTAAGCGCCAAAGTGAACAAACGAGATTATCCGACATATGCGTAAGATGTA 704  
DB 573 TCGTATTAATGATTTAATAGCTTATGCGCACTATACAGATCAGTGTAGCGTGTGA 632  
QY 705 TATACAGGCTTAATATAGCTTGAAGGACAAATGCGCAAGTTGGTGGCTATATCA 764  
DB 633 CATACGGGATTAGACGGTGTATGCGGACCGGATTTCTAGAGATTTGATTAAGATATATCA 692  
QY 765 ATTCCTAGAGATCTAACGTTAGGGGTATTAATCTAGTGGCACTATTCGCAAGCTATGA 824  
DB 693 ATTTAAGAGAAATTAACACTAATGATATGATGCTTTCTATTTCCGAATATGA 752  
QY 825 CACTGCCATTAATCCAAATTAATACGAGTGTCACTTAACAGGAAATTTATCAGACGC 884  
DB 753 TAGTAGAAGGTATCCAAATTCGAACAGTTTCCAAATTAACAGAAATTTATCAAAACC 812  
QY 885 A--ATTGAGCAACAGGGGTAAATATGCGAAGTATGAATTGTATATATATGACCT 942  
DB 813 AGATTAAGAAAATTTGATGTGATTTTGAAGGCTGGGCTCAGGGCATAGAAAGATAT 872  
QY 943 TCGTTTTCCGCTATAGACATGCGGTTATCCGAAGCCCGCATCTACTGTAATTTCTAGAA 1002  
DB 873 TAGGAGTCCACATTTGATGATATTAATCAATATACATCTATACGAGATGCTCATAG 932  
QY 1003 CAATTAACAATTTTGAAGCACTTATACAGATGAGTGTACTAGGCAATATGACTTACTG 1062  
DB 933 GGGTATTTATATGCTCAGGGGATCA-----AATATAGCTTCTCTCTAGAGTT 983  
QY 1063 CGGGGACACAAATTAATCTCGGCAATAGAGGCGGATTAATTAATCTCAACGATGG 1122  
DB 984 TTGGGGGCGAATTTCACTTTTCCGCTATATGAACTATAGGGA-----ATGCA 1032  
QY 1123 TCTACCAATATCTTATTAATCTGTATAGATTAATCTTCTCTCGAGACGTATATGG 1182  
DB 1033 GCTCCCAACAAAGATTTGTGCTCAACTAGTCAAGGCGGTATAGAAATATATGCTCC 1092  
QY 1183 ACTGATCAATATGAGAGAGTCTTATAGGGAAATTTACTTGAACCTATCATGTGTTC 1242  
DB 1093 ACTTATATAGAAAGACCTTTTATATAGGATTAATATATCAACACTATCTGTTCTTGAC 1152

QY 1243 CTTACTGTATGATTTAATTTTGAAGAACTCTAGAAATATCTTTGAAAGAGTACTGCTAAC 1302  
DB 1153 GGGAC-----AGATTTGCTTATAGGAACCTCTCAAAATTTCCATCCGCTATATACAGAAA 1208  
QY 1303 TATATGCAACCCATATGATGATCACTGGGCTTCAATTAAGATTCAGAAATCTG--AATTAAC 1361  
DB 1209 AAGCGGAACGATGATTCCTGTGATGAAATACCGCACAGAAATTAACACGTGCACCTAG 1268  
QY 1362 ACCAGAAACACAGAACGACCAATTAATGATCATATAGCATAGGTTATCTCACATAGG 1421  
DB 1269 GCAAGATTTTATGATATGATTAAGCCATGTTTAAATGTTTGGT-----TCAGCTTTAG 1322  
QY 1422 GCTCAATTTCAATCTAAGGTGATGATACAGATTAATCTTTGAGCGCACGATGTCAGA 1481  
DB 1323 TAATATAGTATGATATTAATAGAGTCCAAATGTTTCTTGGACGACGATGTCAGAC 1382  
QY 1482 TCGTACAAATCAATTAATGATGATGATTAACAAATACATTTGTAATATCATTTCA 1541  
DB 1383 CCTTACAAATTAATGATTCGAGAGAGATTAATCAAAATTAACATTTGTAATTAACATAC 1442  
QY 1542 CCTTAATGAGTACCTGTGATGATGAGCGCAGAGATTTACAGAGGGGATTAATCCG 1601  
DB 1443 ACTTCACTGATGATCTATCTGTATTAAGAGGCGCGGTTTACGAGAGAGATTTCTTG 1502  
QY 1602 AACTAATGTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1661  
DB 1503 ACAGAACAGTGAAGGACATTTGCTTATATATATATATATATATATATATATATATATATAT 1562  
QY 1662 GCGGTATCCGCTGAGAGTTGCTTATGCTGCTTCAAAATGCTGCTGAGGTTACTGT 1721  
DB 1563 AAGTATTCGCAAGAAATGCTATATGCTTACTTACAAATTAATTAATTAATTAATTAATTA 1622  
QY 1722 CGAGGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1781  
DB 1623 TCGAGGTGAACGATTTTGTGCTGATCAATTTTAAACAAATGATGATGATGATGATGATGAT 1682  
QY 1782 GACATCTCAATCAATTAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1841  
DB 1683 AACTTCAATCAATTTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1742  
QY 1842 AACTGCT--GGAATATGATTAATTAATTAATGATGATGATGATGATGATGATGATGATGAT 1898  
DB 1743 GAGTATGTTCAACAGTGTGCTGATGATGATGATGATGATGATGATGATGATGATGATGAT 1802  
QY 1899 AATTGAATCAATTCGAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1958  
DB 1803 AATTGAATGATTCAGTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1862  
QY 1959 AGAGCGGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2018  
DB 1863 AAGGCGGTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1922  
QY 2019 AGATTAATCAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2078  
DB 1923 GATTAATCAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1982  
QY 2079 AGATTAATCAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2138  
DB 1983 GATTAATCAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2042  
QY 2139 AAATTAATCAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2198  
DB 2043 GATTAATCAATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2091  
QY 2199 TAATGACATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2258  
DB 2092 -----CGTGTGAGAGAGAG 2108  
QY 2259 TGAAGATTAATCAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2318  
DB 2109 TACGATTAATCAATCAAGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2168



Db 513 TTGAGAGATGTTTCACTGTTTGGACAAAGTGGGATTTGATGCCGACTATCAATAG 572  
Qy 645 TTAATATGAGCCGCAAGTGGACAAACGAGAGATTATTCGACTATTCGGTAGATGTA 704  
Db 573 TCCATTATAAGATTAACTAGAGCTTATTTGGCACTATACAGATCATGCTGTACCTGTGA 632  
Qy 705 TAATACAGGTCTAAATAGCTTGGAGAGGACAAATGCCGCAAGTTGGGTGGCTTATATCA 764  
Db 633 CAATACGGGATTAGAGCGGTATGGGACCGGATTTAGAGATTGAGATTAGATTATATCA 692  
Qy 765 ATTCGGTAGAGATCTAAGTTAGGGGTATATAGATCTAGTGGCACTATTTCCCAAGCTATGA 824  
Db 693 ATTTAGAGAGATTAACTACTATCTATTTAGATATGCTTTCTATTTCCGACTATGA 752  
Qy 825 CACTGCACTTATCCAAATTAATACAGTGTCACTTAAACAAGGAGTTTATACAGCGC 884  
Db 753 TAGTAGAACGTATCCAAATTTGGACAGTTTCCCAATTAACAAGAGAAATTTATACAAACC 812  
Qy 885 A--ATTGAGACACAGGGGTAAATATGGCAAGTATGAATTGGTATTAATATATGCACT 942  
Db 813 AGTATTAAGAAATTTGATGTAGTATTTTCAAGGCTCGGCTCAAGGCAATAGAAAGATAT 872  
Qy 943 TCGTTTCCGCTATAGAGACTGGGGTATCGAAAGCCCGCATCTATGATTTTCTAGAA 1002  
Db 873 TAGAGTCCACTTTGATGATATCTTAAAGATTAACATCTATAGGATGCTCATAG 932  
Qy 1003 CAATTAACAATTTTACACTTCAACAGATGCTCTACTAGCATATGACTTACTG 1062  
Db 933 GGGTATATATATATGTGTCAAGGGATCA-----AATATAGCTTCTCTGTAGGGTT 983  
Qy 1063 GGGGGGCAACAATTCATCTCGGCCATATAGAGGCGGATTAATATACCTCAACCATGGG 1122  
Db 984 TTGGGGGCCGAATTCATCTTTCGCTATATAGAACTATGGGAA-----ATGCA 1032  
Qy 1123 TCTACCAATCTCTTCTATATCCGTATAGATTATCATCTTCTCTGAGAGATATATGG 1182  
Db 1033 GCTCCACACAGAGATTTGTTGCTCACTAGTCAAGGCGGTATATACAACTATATCTCC 1092  
Qy 1183 ACTGAATCATATGACAGAGAGTCTTATAGGGGAATTTACCTTGAACCTATATCAATGTGTC 1242  
Db 1093 ACTTATATATAGAGACCTTTTATATAGGGATTAATATCAACAACATCTGTCTTGAC 1152  
Qy 1243 CCTACTGTTAGATTATTTTAGGAACCTCAGAAATCTTTGAAAGAGTATCTGTAAC 1302  
Db 1153 GGGAC-----AGAAATTTGCTTATAGAACCTCTCAAAATTTGCCATCCGCTATATACAGAAA 1208  
Qy 1303 TATATGCAACCCATAGTACACCTGGGCTCAATTAATAAGATTCAAGAACTG--AATTACC 1361  
Db 1209 AAGCGAACGGTATGATTCGCTGATGTAATACCGCCACAGAAATTAACAAGTCCACTAG 1268  
Qy 1362 ACCGAAACAAACAGAAACGACCAATTAATGATCATATAGTCAATAGTTATCTCAATAGG 1421  
Db 1269 GCAAGGATTTAGTATGATGATTAAGCCATGTTTCAATGTTTGT-----TCAAGCTTTAG 1322  
Qy 1422 GCTCATTTCAAACTTAGGGTGAATGACAGATATATCTTTGAGCGCACGGTAGTGCAGA 1481  
Db 1323 TATATAGTATGATAGTATATATAGAGCTCAATGTTTTCTTGGACGCAACGGTAGTGCAC 1382  
Qy 1482 TCGTAAATATACATTAATGATTCAGATAGCAATTAACAATAATCAATGGTAAATATCA 1541  
Db 1383 CCTTACAAATTAATATGATTCGAGAGAGATTAATCAAAATACATATGGTAAACACATAC 1442  
Qy 1542 CCTTAATTCAGTATCTGTAGTCAAGTGGCCAGAGATTACAGAGAGGAGTAAATCCG 1601  
Db 1443 ACTTCACTAGTATCTACTCTGTATAGAGGGCCCGGTTTACCGAGAGATATTTCTTGG 1502  
Qy 1602 AACTTAACGTTAATGTATGTACTAAGTATGGGCTTTAATTTTAAATATATCATCATTA 1661  
Db 1503 ACCAACAAGTGGAGCACTATTTGCTTATATCTATATGTTAATATATATGGGCAATTA 1562  
Qy 1662 GCGGTATCGCGTATGAGTTCGTATATGCTGTTTCAACAACATGCTGTAGAGGTAATCT 1721  
Db 1563 AAGGTATCGTGAAGATATGCTATGCTCTACTACAAATCTAAGATTTTACGTAAACGGT 1622

Qy 1722 CGAGAGAGTACTACTTTTGAATCAAGATTCCCTAGTACTATAGTGCAAATGAGTCTTT 1781  
Db 1623 TGCAGGTGAACGAGATTTTCTGGGTCAATTTAACAAAACATATGATACGGTGAACCATTT 1682  
Qy 1782 GACATCTCAATCATTTTATGATTTGGAGAAATTTCCGTAGGTATTTAGTGCATCTGGCACTCA 1841  
Db 1683 AACATTCCAATCTTTTATGATAGCAATTAATAACGCTTTTATCATTTCCCATGACCCA 1742  
Qy 1842 AACTGCT---GGAATAAGTATTAAGTATTAATGACAGTACAAACGTTTCACTTGAATTA 1898  
Db 1743 GAGTATTCACAGTATGCTGTACTTATTTAGTACAGGAAATGAACTTTATATAGCAG 1802  
Qy 1899 AATTGAATTCATTCCAATTAATGCAACCTTGAAGCAGAAATACGATTTAGAAAGGCGCA 1958  
Db 1803 ATTTGAATGATTCAGATTAATCTGCAACATTTGAAGCAGAAATATGATTTAGAAAGACACA 1862  
Qy 1959 AGAGCGGTGAATGCTGTCTGTTTACTAATACGAATCCAAAGAAATGGAACACATGTGAC 2018  
Db 1863 AAGGCGGTGAATGCGCTGTTTACTTATTAACCAAAATGGGATTAATAAACAAGTGTAC 1922  
Qy 2019 AGATTAATCATATGATCAAGTATCCAAATTTATAGTGGCGTGTATTCGGATGAATTCGCTT 2078  
Db 1923 GATTAATCATATGATCAAGTATCCAAATTTATAGTGAATTTTATCAGATGAATTTGTCT 1982  
Qy 2079 AGATGAAGAGAGAAATTTACTTGAAGAAATGAAATATGCCAAACGACTCAGTATGAAAG 2138  
Db 1983 GATGAAGAGAGAAATTTGTCCGAGAAAGTCAAAACATGCCAAGGCACTCAGTATGAGCG 2042  
Qy 2139 AAATTAATCTCAAGATCCAAATTCATCATCATATTAACAAACAGACTTCATATCTAC 2198  
Db 2043 GAATTAATCTCAAGATCCAAATTCCAAGGCAATCAATAGGCAATCTGAC----- 2091  
Qy 2199 TAATGAGCAATGCAATTTTCAATCTATCCATGAACATCTGAACATGAGATGGTGGGAG 2258  
Db 2092 -----CGTGTGGAGAGAG 2108  
Qy 2259 TGAGAACATTAATCAATCCAGAGAGAAATGACGTATTTAAAGAAATTTACCTCAACTACC 2318  
Db 2109 TACGAAATTAATCAATCCAAAGAGAGATGACGATTTCAAGAAATTTATCTCACACTACC 2168  
Qy 2319 GGGGACTTTTATAGAGTGTATTCGACGATATTTATATCAAAATTAAGAGATCGGAAT 2378  
Db 2169 AGGTACCTTTGATGAGAGGTATCCAAATATTTGTATCAAAATATCATTAATCAAAAT 2228  
Qy 2379 AAAAGCTTAATACCGCTACCAATTAAGGGGTATTTGAAGATATGCAAGATTTAGAT 2438  
Db 2229 AAAAGCTTTTACCGGTATCAATTAAGAGGGTATATCGAAATGATCAAGATTTAGAAAT 2288  
Qy 2439 ATATTTGATTCGTTATATGCGAAACATGAAACATTTGATGTTCCAGAGTACCGAGTCCGT 2498  
Db 2289 CATTTTATATTCGTTACAGATGCAAAACATGAAACATGAAATGTCCAGAGTACCGGTTCTT 2348  
Qy 2499 ATGGCGCTTCACTGTAAGAACCCAAATCGAGAGTGGGAGAAACCGAATGATGCGCAC 2558  
Db 2349 ATGGCGCTTCAAGCCAAAGTCCAAATCGGAAAGTGGAGAGCCGAATGATGCGGCGC 2408  
Qy 2559 ACAATTTGAATGAAATCCGATCTAGATTTCTCTCAGAGATGGAAGAAATATGTGSCA 2618  
Db 2409 ACACCTTGAATGAAATCCGATCTTGAATGTTGTGTATGAGGATGGAAGAAAGTGTGCCA 2468  
Qy 2619 TCAATCCCATCATTTCTCTTTGGAATATGATATTTGATGCAAGACTTGCATGAGAACT 2678  
Db 2469 TCAATTCGATCATTTCTCTTATACATGATATGATATGATATGATCTTAATATGAGACT 2528  
Qy 2679 AGCGTGTGGGTGTATTCAGAGTATTAAGCAGAGAAAGTCAATGCAAGACTAGAGGAATCT 2738  
Db 2529 AGGTATATGGGTATCTTTAAGATTAAGACGCAATGAGGCAAGCAAGACTAGAGGAATCT 2588  
Qy 2739 GGAATTTATTAAGAGAAACATTTATTAAGAGAGCACTGTCTCTGTGTGAAGAGACAGA 2798  
Db 2589 AAGTTCCTCGAAGAGAAACATTTATGATGAGAGAGCGTACGTGTGTGAAGAGACGGA 2648



OY	1003	CACCTTACAATTTTTAGCACTTCATCAGATGGAAGTGCTACTAGGCATATGACTTACTGG	1062
Db	933	GCGTATTATTATTGTGTGAGGCAATCA-----AATAATGCTCTCCGTGAGGTT	983
OY	1063	CGGGGGCACAAATTCANCTCCGCCAPTAGGAGCGGATTAATAACTCAAACGATCGG	1122
Db	984	TTCGGGGCAGAAATTCACCTTTCCGCTATATGGAACATAGGGA-----ATGCA	1032
OY	1123	TCATCAAACTCTTATTAATCTGTAAGAATTAATCATCTCTCCGAGAGTATATGG	1182
Db	1033	GCTCACAACAACGATATTGTGCTCAACTAGGTCAAGCGCGGTATAGAACATATACGTCC	1092
OY	1183	ACTGAATCATATGCAAGAGTGCTTCTATGGGGAAATTAACCTTGAACTATTCATGCTGC	1242
Db	1093	ACTTATATATAGMAAGCTTTTATATATAGGGATTAATATCAACAACATATCTGTCTTGAC	1152
OY	1243	CCATCTGTAGATTAAATTTTAGAACCTCAGAACTACTTTGAAAGAGTATGCTTAC	1302
Db	1153	GGGAC---AGAAATTTGCTTATGGAACCTCTCAAAATTTGCCATCCGCTGATACAGAA	1208
OY	1303	TATAGTCAACCCTATAGATCACTGCGGCTTCAAATTAAGAATTCAGAACTG-AATTACC	1361
Db	1209	AAGGGAAACGGTAAGTTGCTGTAAGTAATACCGCACAGATTAACAACGTGCCACTAG	1268
OY	1362	ACCGAATAACAAGACGACCAATTAATGAATCATATATAGTCATAGTTATCTCATAGG	1421
Db	1269	GCAAGGATTTAGTCATCGATTAAAGCAATGTTCAATGTTTTGCT-----TCAGGCTTAG	1322
OY	1422	GCTCATTTACAATCTAGGGTGCAATATACAGTAATATTTCTTGAGACGACCTGATGCA	1481
Db	1323	TAAATGATGTATAGTAAATPAATAGAGCTCCAAATGTTTTCTTGAGACGACCGTATGCAAC	1382
OY	1482	TCGTACAATAACATTAAGTACAGATAGCATTAACAATAACCATTTGGTAATCATTTCAA	1541
Db	1383	CCCTACAAATACAAATGATCCGGAGAGGATTAATCTCAATACCATTTGGTAAGACATAC	1442
OY	1542	CCTTAATTCAGGTAACCTCTGATGCAATGCGCCAGAAATTAACAGAGGGGATATATCCG	1601
Db	1443	ACTTCAGTCAGGTACTACTGTGTATAGAGGGCCGGGGTTTACGGAGGAGATATTTCTGG	1502
OY	1602	AACATPACGTTAATGTATGTATCTAATAGTGGGCTTAAATTTTAATAATCATCATTAACA	1661
Db	1503	ACGAACAAGTAGAGACCAATTTGCTTAATCAATATGTTAATTAATAGGCAATTAACCCA	1562
OY	1662	CGGGTATCGCTGAGAGTTGCTTATATGCTGCTTCAACAACATGGATCCGAGGGTAACTGT	1721
Db	1563	AAGGTATCTGCAGAAATACCGCTATGCTCTTACTACAAATTAAGAAATTAACGPAAACGT	1622
OY	1722	CGAAGGAGTACTACTTTTGATTCAGAGATTCCTCAGTACTATGATGAGTCGAATGAGCTTT	1781
Db	1623	TGCAGGTGAAGGGAATTTTGTGCTGGTCAATTAACAACAACATGATACCGGTGACCATTT	1682
OY	1782	GACATCTCAATCATTTAGATTGCGAAATTTCTGTAGGTATTAATGATGATCTGGCACTCA	1841
Db	1683	AACATCTCAATCTTTTATGTTACGGAACATTAATAACAGCTTTTACATTCCTCAATGAGCCA	1742
OY	1842	AACAGCT---GGAATAGTATAAGTAATTAATAGCAGTAGACAAAACGTTTCACTTGTATTA	1898
Db	1743	GAGTATGTTTACAGTAGTAGGTGCTGTAATCTTATTAATGAGGAGATGAAAGTTATATAGCAG	1802
OY	1899	AATTGAATTCATTCCTCAATTAAGTCAACCTTCGAGACGAAATACGATTTAGAAAGGGGCA	1958
Db	1803	ATTGAATTAATTCAGATTACTGCAACTTTGAAAGCAAAATATATATTTAGAAAGACACA	1862
OY	1959	AGAGGCGGTGAATGCTCTGTTTACTAATACGAATCCAGAGAATYGAAAAACAGTGTGAC	2018
Db	1863	AAAGGCGGTGAATGCTCTGTTTACTTCTATTAACAATAGGGGATTAATAAACAGATGTGAC	1922
OY	2019	AGATTATCATTTATGATCAAGTATTCAAATTAATAGTGGCGTTTATCCGATGAATTCGCTT	2078
Db	1923	GGATTTATCATTTATATCAAGTATTCAAATTAATAGTGGATTTGTTTATCAATGAATTTTGTCT	1982
OY	2079	AGATGAAGAAGAAATTAATCTTGAAGAAGTGAATAATGCGAATGCACTCAGTATGAAG	2138

Db	1963	GGATTAAGAGAGAAATGTCCTCGAAGAAAGTCAAACTCCGAAAGGCACTCAAGTATGAGCG	20442
OY	2139	AAACTTACTCCAAAGATCCAAACCTTCACATCCATCAATTAAGAACCAAGCTTCATATCTAC	21998
Db	2043	GAATTACTTCAAGATCCAAACCTTCAAAGCAATCAATAGGCACTAGAC-----	20912
OY	2139	TAATGAGCAATGCAATTTCACATCTATCCATGAACAATCTGAACATGAGTGTGGGGAAG	22586
Db	2092	-----CGTGGTTTGAGAGAGAG	2108
OY	2259	TGAGAACATTAACATCCAGAAAGAAATGACGTATTTAAAGAGATTAAGTCACTAC	2318
Db	2109	TACGGAATATTCACATCCAAAGAGAGATGAGGTATTCAAAGAAATATATGTCACATCAC	2168
OY	2319	GGGGACTTTTAATAGAGCTTATCCGAGCTATTTATATCAAAAATPAGAGAGTCGGAAAT	2378
Db	2169	AGGTACCTTATATAGAGTCTATCCAAACATATTTGATCAAAAAAATCGATGAAATCAAAAT	2228
OY	2379	AAAAGCTATATCTCGCTACCAATTAAGAGGGTATATGGAATGTCAAGATTTAGAGAT	2438
Db	2229	AAAAGCTTTACCGTTATCCATTTAAGAGGTTATATGAAATATGTCAAGCTTATGAAT	2288
OY	2439	ATATTTGATTCGTATATAATGCGAAACATGAAACATGGAATGTCACAGTACGAGTCGT	2498
Db	2289	CTATTTATATTCGTATACATATGCAAAACATGAAACATGAAATGTGCGAGGTACGGGTCTT	2348
OY	2499	ATGCGCGCTTTCAATGAAACCCCAATCCGAAGGTCCGAGAAACCGAATCGATCCGACCC	2558
Db	2349	ATGCGCGCTTTACCGCCAAAGTCCAAATCCGAATGTGAGAAAGCGCGAATCGATCCGCGCC	2408
OY	2559	ACATTTTGAATGGAATCCGTATCTAGATGTGTTCCGACAGATGAGAAATAATGCGCA	2618
Db	2499	ACACTTGAATGGAATCCTGATCTAGATGTGTTCCGTAAGGATGAGAAAGTGTGCCCA	2468
OY	2619	TCATTTCCCATCATTTCTCTTGGATATTTGATATTTGATGCAACAGCTTGACATGAAATCT	2678
Db	2469	TCATTTCCCATCATTTCTCTTGGATATTTGATATTTGATGCAACAGCTTGATGAGAAATCT	2528
OY	2679	AGCGGTGTGGGTGTATTTCAAGATTTAAGACGACGAGAAAGTCAATGCAAGATCTAGGAAATCT	2738
Db	2529	AGCGGTGTGGGTGTATTTAAGATTTAAGACGACGAGAAAGTCAATGCAAGATCTAGGAAATCT	2588
OY	2739	GGAATTTATTAAGAGAAACCAATTAATTAAGAGAAACCTGTCTGTGTGAAGAGAGACA	2798
Db	2589	AGAGTTTCTCGAAGAGAAACCAATTAATTAAGAGAAACCTGTCTGTGTGAAGAGAGAGACA	2648
OY	2799	GAATAAATGAGAGACAAACGTGAAAACCTACATTTGAAAACAAACGAGTATTTACAGA	2858
Db	2649	GAATAAATGAGAGACAAACGTGAAAATTTGAAATGGAACAAATATCGTTTATTAAGA	2708
OY	2859	GGCAAAAGAGCTGTGATGCTTTATTTGATGATTTCTCATATATATGATTTACAGCGGA	2918
Db	2709	GGCAAAAGAGCTGTGATGCTTTATTTGATGATTTCTCATATATATGATTTACAGCGGA	2768
OY	2919	TACAAACATTTGGCAATGATTCATATGGGCAATTAACCTGTTCATTCGAAATTCGAGAGCTTA	2978
Db	2769	TACAAACATTTGGCAATGATTCATATGGGCAATTAACCTGTTCATTCGAAATTCGAGAGCTTA	2828
OY	2979	TCTGTTCAGAAATATCTGTATATCCCGGGTGTAAATGCGGAAATTTTGAAGAATTAGAGAG	3038
Db	2829	TCTGTTCAGAAATATCTGTATATCCCGGGTGTAAATGCGGCAATTTTGAAGAATTAGAGAG	2888
OY	3039	TGCAATATATCACTGCAATCTTCCCTATACAGATCGAGAAATGTCTGTTAAAAATGAGTATTT	3098
Db	2889	GCGATATTTTCACTGCAATCTTCCCTATATGATGCGAGAAATGTCTATAAAAATGAGTATTT	2948
OY	3099	TAATTAAGGAATTAAGCAATGCTGGAATGTAATAAGGCAATGATGATGT---ACAACAGAGCCA	3155
Db	2949	TAATTAAGGAATTAATCTGCTGGAACGTAAGGCAATGATGATGATGTAAGAAACAAACAA	3008
OY	3156	TCACGTTTCTGTCTTGTATATCCCAAGATGGGAAGCAAGATGTCAACAGATTTCCGCT	3215



Db 3009 CCACGTTGGCTCTTGTGTTCCGGAATGGAGCAAGATGTCAACAAAGTTGCTGT 3068  
Qy 3216 CTGTCCGGGCGGTGTATATCTCCGTGTACAGCGTACAAAGAGATATGAGAGG 3275  
Db 3069 CTGTCCGGGCGGTGTATATCTCCGTGTACAGCGTACAAAGAGATATGAGAGG 3128  
Qy 3276 TTGTGTACGATCTGATGAAATTCGAAACATACAGACGAATTAATTTAAACTGTGA 3335  
Db 3129 TTGCGTAACTTATCATGAGATGAGAACATATACAGACGAATTAATTTAAACTGTGA 3188  
Qy 3336 AGAAGAGAAAGTGTATCCAAACGATACAGAAAGTGTATATATCTGACACCAAG 3395  
Db 3189 AGAAGAGAAAGTGTATCCAAACGATACAGAAAGTGTATATATCTGATTAATCAAG 3248  
Qy 3396 TACAGAGATATGTAAATTCCTGTAATGCTGATATGAGATGATATGAATGATATAC 3455  
Db 3249 AGAATACGAGATGCGT-----ACACTTCTCGTAATCGAGATATATACAACTGCTTC 3302  
Qy 3456 AGCATCTGTATATTAACAAACGATATGAAAGAAACGATATACAGATGTACGAAGAA 3515  
Db 3303 CGTACAGCTGATTAATGCGTCACTATGAAAGAAATCGTATACAGATGAGAAAGAA 3362  
Qy 3516 TAATCATGTGATATGACAGAGGATGTGAAATTAATCCACATACAGCTGTTATAT 3575  
Db 3363 GAATCTTGTGAATTTTACAGAGGATATAGGATTTACAGCCCATACAGATGTTATGT 3422  
Qy 3576 GACAAAGAAATTAAGATTAATCTCCAGAAACGATTAAGATTAATGATTTGAGAAAC 3635  
Db 3423 GACAAAGAAATTAAGATTAATCTCCAGAAACGATTAAGATTAATGATTTGAGAAAC 3482  
Qy 3636 GGAAGGAAATTAATGATTAATGATTAATCTCTTATGAGAAATAG 3687  
Db 3483 GGAAGGAAATTAATGATTAATGATTAATCTCTTATGAGAAATAG 3534

RESULT 14  
US-10-672-163-25  
; Sequence 25, Application US/10672163  
; Publication No. US20040093637A1  
; GENERAL INFORMATION:  
; APPLICANT: Malvar, Thomas  
; APPLICANT: Gilmer, Amy Jelen  
; TITLE OF INVENTION: Polynucleotide Compositions Encoding Broad Spectrum  
; TITLE OF INVENTION: delta-Endotoxins  
; FILE REFERENCE: 11792.0215, DUS02 MECO:215--2  
; CURRENT APPLICATION NUMBER: US/10/672,163  
; CURRENT FILING DATE: 2003-09-26  
; PRIOR APPLICATION NUMBER: US 09/997,914  
; PRIOR FILING DATE: 2001-11-30  
; PRIOR APPLICATION NUMBER: US 09/261,040  
; PRIOR FILING DATE: 1999-03-02  
; PRIOR APPLICATION NUMBER: US 08/754,490  
; PRIOR FILING DATE: 1996-11-20  
; NUMBER OF SEQ ID NOS: 30  
; SOFTWARE: Patent version 3.2  
; SEQ ID NO 25  
; LENGTH: 3534  
; TYPE: DNA  
; ORGANISM: Artificial sequence  
; FEATURE:  
; OTHER INFORMATION: Hybrid Delta-Endotoxin  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (1)..(3531)  
US-10-672-163-25

Query Match 38.0%; Score 1402; DB 17; Length 3534;  
Best Local Similarity 65.7%; Pred. No. 0;  
Matches 2243; Conservative 0; Mismatches 1070; Indels 99; Gaps 10;  
Qy 285 TCAGTGGAAATTTTCTAGAACTGTCGAAACAATTAATCAACAATTAACAGAAA 344  
Db 213 TCATGGGAGCGATTCTGTGACAAATTAAGAGTTAATTAACAAAGATTAAGAAATTT 272

Qy 345 TCTAGAAATACGGCACTTGCTGATTAACAGTTTAAAGAGATTCCTTTAGAGCCATCA 404  
Db 273 CCTAGGAACCAAGCATTTCTGATTAAGAAAGACTTAACCAATCTTTATCAATTTAACG 332  
Qy 405 ACAGTCACTTGAAGATTTGCTGAAAGAACGATGATGAGAAAGACAGAGATGTTCTTAA 464  
Db 333 AGAATCTTTTAAAGATGAGGAAAGCAAGTCTACTAATCCAGATTTAAAGAAAGATGGG 392  
Qy 465 TACCAATATATAGCTTAAGAACTTGATTTCTTAAATGAGATGCGCTTTGGCAATTAG 524  
Db 393 TATTCATTTCAATGACATGAAACAGTGCCTTCAACCGCTATCTCTTTTGGAGTTCA 452  
Qy 525 AAACCAAGAGTTCCATTTATTAATGATATATGCTGAAGCTGAAATTTACACCTATAT 584  
Db 453 AAATATCAAGTTCCTCTTTTATCAGTATATGTTCAAGCTGCAAAATTTACATTTACAG 512  
Qy 585 ATTGAGATGCGCTCTTTTGTGATGAATTTTGGGCTTAATCGCAGAGAAATTCACAG 644  
Db 513 TTGAGAGATGTTTCAAGTGTGAGCAAGATGGGATTTGATGCGGCACTATCAATAG 572  
Qy 645 TTAATATGAGCGCAAGTGAACAAACGAGATTAATTCGACTATTCGCTAGATATGA 704  
Db 573 TCGTTATATATGATTAATTAAGCTTATATGCAATTAACAGATCATGCTGATAGCTGTA 632  
Qy 705 TAATACAGCTTAATATAGCTTGAGAGGACAAATGCGCAATTTGGGTGCTTATATCA 764  
Db 633 CAATAGGATTAAGACGCTGATGAGGACCGAATTCAGATTTGATTAAGATTAATCA 692  
Qy 765 ATTCCGTAGAGATCTTAAGCTTATAGGAGTATTAATGATGAGCTATTCGCAAGCTATGA 824  
Db 693 ATTTAGAGAGATTTAACAATACTATGATTAATGATGATTTCTTATTTCCGAACTATGA 752  
Qy 825 CACTGCACTTAATCCAAATTAATACAGATGCTCAATTAACAGAGAAATTTATACAGCC 884  
Db 753 TAGTAAAGATTAATCAATTTGAAAGATTTCCCAATTAACAGAGAAATTTATCAAAACC 812  
Qy 885 A--ATTGAGCAACAGGGTAAATATGCAAGTATGAATTTGATTAATTAATGACCT 942  
Db 813 AGTATTAAGAAATTTTGAATGATGATTTTGAAGCTCGGCTCAGGGCATGAAGAAATAT 872  
Qy 943 TCGTTTCCGCTATGAGACGCGGTTATCCGAGCCGCACTTACTTATTTCTAGAA 1002  
Db 873 TAGAGCTCAACATTTGATGATTAATTAATTAATCAATTAATCAATTAATCAATTAAT 932  
Qy 1003 CAATTAATTAATTTGAGCACTTATCAAGATGAGTCACTAAGGATTAATGATTAATGAT 1062  
Db 933 GGGTTATTAATTTATGATGAGGATCA-----AATATAGGCTTCTCTGATAGGGTT 983  
Qy 1063 CCGGGGCAACAATTAATCTGCGCAATTAAGAGGCGGATTAATTAATCTCAACGATGG 1122  
Db 984 TTGCGGGCCAGAAATTAATCTGCGCTATTAAGAACTATAGGAA-----ATGCA 1032  
Qy 1123 TCTAACAAATCTTATTAATCTGTAAGATTAATCAATCTTCTCGAGACGATATTTGG 1182  
Db 1033 GCTCCACAACAAGATTAATGTTGCTCAACTAGGTCAGGGGCTGATTAAGAACTATGCTC 1092  
Qy 1183 ACTGAATCATATGACAGAGTCTTCTATGGGGAATTAATCACTTGAACCTATTCATGCTGC 1242  
Db 1093 ACTTATATTAAGAAAGCTTTTATATATAGGGAATTAATCAACAATATCTGTTCTTGAC 1152  
Qy 1243 CCTAGTGTATGATTAATTTTAAAGAACTCTGAGATTAATTTGAAGAGATGCTGTAAC 1302  
Db 1153 GGGAC-----AGATTTGCTTATAGAACTCTCAAAATTTGCCATTCGCTGATTAAGAAA 1208  
Qy 1303 TATATCAACCCATATAGTCACTGCGCTTCAATTAAGATTCAGAAATCTG--AATTAAC 1361  
Db 1209 AACCGAGACGATATGATTCGTGATTAATTAATCCGCAAGATTAACACGTCGCACTAG 1268  
Qy 1362 ACCAGAAACAACAGAAAGCAACAATTAATGATATCATATGATAGTATGCTCAATAGG 1421  
Db 1269 GCAAGATTTATGATCAATGATTAAGCAATTTTCAATGTTTCTG-----TCAGGCTTTAG 1322



QY 1422 GCTCATTTACAACTAGGGTGCATGACGATATATCTTGGACCGCAGCTAGTCGAGA 1481  
Db 1323 TAATAGTAGTGAAGTAAATAGAGCTCAATGTTTTCTTGGACGACCGTAGTCGAC 1382  
QY 1482 TCGTACAAATACCACTTAGTTCAGATAGCAATACCAATACCATTTGGTAAATGATCCAA 1541  
Db 1383 CCTACAAATACCAATTAATCCGAGAGATTAATCAATACCAATTTGGTAAATGACATAC 1442  
QY 1542 CCTTAATTCAGGTAACCTCTGAGTCAGTGGCCAGAGATTAACAGAGGGGATATATACG 1601  
Db 1443 ACTTCAGTCAGGTAACCTCTGAGTCAGTGGCCAGAGATTAACAGAGGGGATATATACG 1502  
QY 1602 AACTACGTTAAATGATGATGATCAATAGGCTTAAATTTAAATATACATATTAACA 1661  
Db 1503 ACCAAACAGTGAAGGACCAATTTGCTTAAATTTAAATTAATAGGCAATTAACCCCA 1562  
QY 1662 GCGGTAATCGGTAAGAGTTCGTTATGCTGCTTCAACAAATGCTCCGAGGGTAACTGT 1721  
Db 1563 AAGGTATCGTGAAGAAATACGCTATGCTCTTACTACAAATCTAAGAAATTTACGTAACGT 1622  
QY 1722 CGAGGAGATACATCTTTTGAATCAAGATTCCTTAAGTATAGTCAATGATGATCTTT 1781  
Db 1623 TGCAGGTGAAGGATTTTCTGCTGATTAATTAACAAACAAATGGAATACCGGTGACCAAT 1682  
QY 1782 GACATCTCATCATTTAGATTTGAGAAATTCCTTAAGTATTAAGTCAATCTGCGAGTCA 1841  
Db 1683 AACATTTCCAACTTTTAATGATTAACGCACTAATTAATACGCTTTTCAATTTCCAAATGACCA 1742  
QY 1842 AACTGCT---GGAATAGTAAATGATTAATTAATGACGATGAACAAAGCTTTCACTTTGATTA 1898  
Db 1743 GAGTATGTTCAACGATAGGTCTGATCTTAACTTTAGTTCAAGGAAATGAATTTATATAGCAG 1802  
QY 1899 AATTGAATTCATTCATTTACTGCAACCTTGAAGCAGAAATACGATTTAGAAAGGCGCA 1958  
Db 1803 ATTTGAATTCATTCATTTACTGCAACCTTGAAGCAGAAATGATTTAGAAAGGCGCA 1862  
QY 1959 AGAGGCGGTGAATGCTCTGTTTCTTAATACGAATCCAAAGAAATGTAAGAAACAGATGTAC 2018  
Db 1863 AAGGCGGTGAATGCTCTGTTTCTTAACTTAATTAACAAATAGGATTAAGAAACAGATGTAC 1922  
QY 2019 AGATTAATCATTTGATCAAGTATCCAAATTTAGGCGCTGTTTATCCGATTAATTTCTGCTT 2078  
Db 1923 GAGTATTCATTTGATCAAGTATCCAAATTTAGGATTTGTTTATCAAGTAAATTTGTCT 1982  
QY 2079 AGATGAAGAGAGAAATTAATCTTGAAGAAATGTAAGAAATGCGAAACGATCTGATGAAG 2138  
Db 1983 GAGTGAAGAGAGAAATTTGTCGAGAAATGCAAAATGCGAAGGATCTGATGAAGCG 2042  
QY 2139 AATCTTACTCAGAGATCCAAATTTCAATCCATCAATTAAGCAACAGACTTCAATCTTAC 2198  
Db 2043 GAATTTACTTCAAGATCCAAATTTCAAGGATCAATTAAGGCAACTAGAC----- 2091  
QY 2199 TAATGAGCAATGCAATTTTCACTATCCATGAAACATCTGAAACATGAGATGTGGGAG 2258  
Db 2092 -----CGTGGTTGAGAGAGAG 2108  
QY 2259 TGAGAACATTTACATCCAGAGAGAAATGACGATTTTAAAGAAATTAACCTCACTAC 2318  
Db 2109 TACGATATTTACATCCAGAGAGATGACGATTTTAAAGAAATTTATGTCACTAC 2168  
QY 2319 GGGGACCTTTTAAATGAGTGTATTCGAGATTTTATCAAAATAAGAGAGTCCGAAAT 2378  
Db 2169 AGGTATCTTTGATGATGCTATCCAAATTTTGTATCAAAATAAGATGATCAAAAT 2228  
QY 2379 AAAAGCTTTAAATCGCTACCAATTTAAGAGGATTAATTTGAAGATGTCAGATTTAGAT 2438  
Db 2229 AAAAGCTTTAAATCGCTATCAATTTAAGAGGATTAATTCGAAGATGTCAGATTTAGAT 2288  
QY 2439 AATTTGATTCGTTAATGATGAGAAATGAAACATTTGATTCAGAGTCCGAGTCCGT 2498  
Db 2289 CATTTTAAATTCGTTAATGATGAGAAATGAAACATTTGATTCAGAGTCCGAGTCCGT 2348  
QY 2499 ATGGCCGCTTTCAGTTGAAAGCCCAATCGAAGGTGCGAGAAACGAATTCATGTCGAC 2558

Db 2349 ATGGCCGCTTTCAGTTGAAAGCCCAATCGAAGGTGCGAGAAACGAATTCATGTCGAC 2408  
QY 2559 AATTTGAAATGAAATCTGATCTAATTTGCTTGAAGATGAGAGAAATGTCGCA 2618  
Db 2409 ACACCTTGAATGAAATCTGATCTAATTTGCTTGAAGATGAGAGAAATGTCGCA 2468  
QY 2619 TCAATTCATCATTTCTTTTGAATTTGAATTTGATGACACACTTTCATGAAATCT 2678  
Db 2469 TCAATTCATCATTTCTTTTGAATTTGATGATTTGATGATGATGATGATGATGATGAT 2528  
QY 2679 AGGCTGTGGGTGATTTCAAGATTTAAGAGGAGAGGATCTGATGATGATGATGATGAT 2738  
Db 2529 AGGCTGTGGGTGATTTCAAGATTTAAGAGGAGAGGATCTGATGATGATGATGATGAT 2588  
QY 2739 GAAATTTAATGAGAGAAACCAATTTAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2798  
Db 2589 AGAGTTTCTGAG 2648  
QY 2799 GAAAGAAATGAG 2858  
Db 2649 GAAAGAAATGAG 2708  
QY 2859 GCGAG 2918  
Db 2709 GCGAG 2768  
QY 2919 TACAAATTTGAG 2978  
Db 2769 TACAAATTTGAG 2828  
QY 2979 TCTGTCAAGATTAATCTGTTATCCGAGGATTAATGCGAGAAATTTTGAAGATTAAGAG 3038  
Db 2829 TCTGTCAAGATTAATCTGTTATCCGAGGATTAATGCGAGAAATTTTGAAGATTAAGAG 2888  
QY 3039 TCGATTAATCACTGCAATCTCCCTTAATGATGAGAGAGAGAGAGAGAGAGAGAGAGAG 3098  
Db 2889 GCGATTAATCACTGCAATCTCCCTTAATGATGAGAGAGAGAGAGAGAGAGAGAGAGAG 2948  
QY 3099 TAATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGAT 3155  
Db 2949 TAATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGAT 3008  
QY 3156 TCAACGTTCTGCTCTTGTATTCAGAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3215  
Db 3009 CCAACGTTCTGCTCTTGTATTCAGAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3068  
QY 3216 CTGTCCGGGCGTGGCTATTAATCTCCGTCAAGCGTCAAGAGAGAGAGAGAGAGAGAGAG 3275  
Db 3069 CTGTCCGGGCGTGGCTATTAATCTCCGTCAAGCGTCAAGAGAGAGAGAGAGAGAGAGAG 3128  
QY 3276 TTGCTTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGAT 3335  
Db 3129 TTGCTTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGATTAATGAT 3188  
QY 3336 AGAAG 3395  
Db 3189 AGAAG 3248  
QY 3396 TACAGAGATTAATTAATTTCCGTAAATGATGATGATGATGATGATGATGATGATGAT 3455  
Db 3249 AGAATACGAG 3302  
QY 3456 AGCATCTGTTAAATTAACAAACGATTAATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3515  
Db 3303 CGTACAGCTGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3362  
QY 3516 TAATCAATTTGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3575  
Db 3363 GAATCTTGTGATTTTAACAG 3422  
QY 3576 GACAAAGATTAATTAATTTCCAG 3635

Db 3423 GACAAAAAGATTAGAACTCTCCAGAAACCGATTAAGTATGATGATTGGAGAAAC 3482  
Qy 3636 GGAAGGAGATTATTTAGTACAGCGGTGAATTAATCTTATGAGAGAAATAG 3687  
Db 3483 GGAAGGAACTTTATCTGTGACAGCGGTGAATTAATCTTATGAGAGAAATAG 3534

RESULT 15  
US-10-739-482-25  
Sequence 25. Application US/10739482  
Publication NO. US20040132975A1  
GENERAL INFORMATION:  
APPLICANT: Malvar, Thomas  
APPLICANT: Mohan, Komarlingham S.  
APPLICANT: Sivaupramaniam, Sakuntala  
TITLE OF INVENTION: Polynucleotide Compositions Encoding Broad Spectrum  
TITLE OF INVENTION: Delta-Endotoxins  
FILE REFERENCE: MECO:220-1  
CURRENT APPLICATION NUMBER: US/10/739,482  
PRIOR FILING DATE: 2003-12-18  
PRIOR APPLICATION NUMBER: US 09/636,746  
PRIOR FILING DATE: 2000-08-11  
PRIOR APPLICATION NUMBER: US 6,242,241  
PRIOR FILING DATE: 1999-02-19  
PRIOR APPLICATION NUMBER: US 6,110,464  
PRIOR FILING DATE: 1997-09-03  
PRIOR APPLICATION NUMBER: US 6,017,534  
PRIOR FILING DATE: 1996-11-20  
NUMBER OF SEQ ID NOS: 35  
SOFTWARE: PatentIn version 3.2  
SEQ ID NO 25  
LENGTH: 3534  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hybrid Delta-Endotoxin  
NAME/KEY: CDS  
LOCATION: (1)..(3531)  
US-10-739-482-25

Query Match 38.0%; Score 1402; DB 18; Length 3534;  
Best Local Similarly 65.7%; Pred. No. 0;  
Matches 2243; Conservative 0; Mismatches 1070; Indels 99; Gaps 10;

Qy 285 TCAGTGGGAATTTCTCTAGACATGTCGAACAATTAATCAACAATTAACAGAAA 344  
Db 213 TCATGGGAGCGCATTTCTGTGACAAATTGAACGTTAATTAAACAAAGAAATGAAGATT 272  
Qy 345 TGCAGGAATACGCACTTCTGCTGATTACAGGTTTGAAGATTCTTTAGAGCTATCA 404  
Db 273 CGGTAGGAACCAAGCCATTTCTAGATTGAAGAGCTAAAGCAATCTTATCAAAATTTACGC 332  
Qy 405 ACGTCACTTGAAGATTGGCTAGAAAACGATGATGACAAAGACGAAGTGTCTTTA 464  
Db 333 AGAATCTTTTGAAGAGTGGAGAGCAAGATCTTAATTCAGCATTTAAGAAAGAGTGC 392  
Qy 465 TACCAATATATAGCTTAGAATTTTCTTAATGCGATGCGCTTTTTCGAATTAG 524  
Db 393 TATTCATTTCAATGACATGAACAGTGCCTTACCAACCGCTATTCCTTTTTCGAGTTCA 452  
Qy 525 AAACCAAGAGTTCATTAATTAATGATATGCTCAAGCTGCAAAATTTACACCTATTAT 584  
Db 453 AAATTAATCAAGTTCCTTTTATCAGTATATGTTCAAGTGCAGAAATTTACATTTACAGT 512  
Qy 585 ATTGAGAGATGCTCTCTTTTGGTATGAAATTTGGCTTACATCGACGAATTTCAAG 644  
Db 513 TTTGAGAGATGTTCACTGTTTGGACAAAGGTGGGGAATTTGATGCCGACATATCAATAG 572  
Qy 645 TTTATTAAGAGCGCAAGTGAACAAAGAGATTAATTCGACATTTGCGTGAATGATA 704  
Db 573 TCGTATTAATGATTTAACTAGGCTTATTTGGCACTTAATCAGATATCTGTGACCTGATA 632

Qy 705 TAATACAGCTCTTAATAGCTTGAAGAGGACAAATGCGCAAGTGGTGCTTAATATCA 764  
Db 633 CATACGGGATTAAGCCGTATGAGGACCGGATTTCTAGATTTGATAGATTAATATCA 692  
Qy 765 ATTCCGTAGAGATTAACGTTAGGGGATTTAGATCTAGTGGACATATTCGCAAGTATGA 824  
Db 693 ATTTAGAGAGATTAATACCTAATCTATTAATTAATGATATGTTTCTTATTTCCGACATTA 752  
Qy 825 CACTCGCACTTAATCAATTAATACAGTGTCTAGTTAACAGGAGATTTATACAGACG 884  
Db 753 TAGTAGAACGTATTCGAATTCGAACAGTTTCCCAATTAACAGAGAAATTTATCAAAACC 812  
Qy 885 A-ATTGAGCAACAGGGTAAATATGCAAGATTAATTTGGATTAATTAATATGACCT 942  
Db 813 AGTATTAAGAAAATTTGATGATGATTTTGAAGCTCGGCTCAGGGGATGAAGAAATAT 872  
Qy 943 TCGTTTTCGCTATAGAGACGTGGTTATCCGAGCCGCACTACTTATTTCTAGAA 1002  
Db 873 TAGAGTCCACATTTGATGATTAATTAACATTAACATTAACATTAACATTAACATTA 932  
Qy 1003 CAACCTTAATTTTATAGCACTTATCAATCAAGATGAGTCTAATAGCATATGACTTAC 1062  
Db 933 GGGTATTAATTAATGATGAGGATCA-----AATATAGCTTCTCTGTAGGGTT 983  
Qy 1063 CGGGGCAACAATTAATCTGAGCCAAATGAGAGCGGATTAATTAATCTCAAGCATGG 1122  
Db 984 TTGGGGGCAAGATTAATCTTCCGTATATGAGAACTATAGGAA-----ATGCA 1032  
Qy 1123 TCTAACCAATCTTATTAATCTCTGATAGATTAATCTTCTCTGAGAGATTAATGG 1182  
Db 1033 GCTTCCACAAACGATTTGTTGCTCAATGATGAGGCGGTGATAGAACTATATGCTTC 1092  
Qy 1183 ACTGAATCATATGACAGAGTCTTATGAGGAAATTAATCACTTAATTCATGCTGTC 1242  
Db 1093 ACTTATATAGAAAGCCTTTAATATAGGATTAATTAATCAATCAATATCTGTTCTGAC 1152  
Qy 1243 CCACTGTTAGATTAATTTTGAAGAACCTCAAGATTAATTTGAAGAGTACTGCTAAC 1302  
Db 1153 GGGAC---AGAAATTTGCTTAATGAGAACTCTCAAAATTTGCCATGCGCTGATACAGAAA 1208  
Qy 1303 TATAGTCAACCCATATGATGATCACTGCGCTTCAATTAAGATTCAGAAATCTG-AATTAAC 1361  
Db 1209 AACGGAGAGATTAATGCTGCTGATTAATTAATTAATTAATTAATTAATTAATTAAT 1268  
Qy 1362 ACCAGAAACAGAGAGCAACAAATTAATTAATTAATTAATTAATTAATTAATTAAT 1421  
Db 1269 GCAAGATTAATGATGATGATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1322  
Qy 1422 GCTCATTTCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1481  
Db 1323 TATATGATGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1382  
Qy 1482 TCGTACAAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1541  
Db 1383 CCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1442  
Qy 1542 CCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1601  
Db 1443 ACTTCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1502  
Qy 1602 AACTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1661  
Db 1503 ACCAACAAGTGAAGAGCAATTTGCTTAATTAATTAATTAATTAATTAATTAATTAAT 1562  
Qy 1662 GCGGTATGAGAGATTTGCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1721  
Db 1563 AAGGTATGAGAGATTTGCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1622  
Qy 1722 CGAGAGGATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1781  
Db 1623 TGCAGGTGAAGAGATTTTGTGCTGATTAATTAATTAATTAATTAATTAATTAATTAAT 1682  
Qy 1782 GACATCTCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 1841

Db 1683 AACCTTCCATCTTTTATGTTACGCACTATTAATACGCTTTTACATTTCCCATGACCA 1742  
Qy 1842 AACTGCT---GGAATTAATTAATTAATGCAAGTAGACAAACGTTTCACTTTGATTA 1898  
Db 1743 GAGTAGTTTCAAGTAGTCTGTATCTTTAGTTTCAAGGAAAGATTTATATAGACAG 1802  
Qy 1899 AATTGAATTCATTCATTAATCTGCAACCTTGAAGCAATAGATTTAGAAAGGCGCA 1958  
Db 1803 ATTGAAATGATTCAGTTACTGCACTTGAAGCAATATGATTTAGAAAGACCA 1862  
Qy 1959 AGAGCGGTGAATGCTGTCTTACTATAGCAATCCAAAGATGTAAGAAACAGATGAC 2018  
Db 1863 AAGGCGGTGAATGCTGTCTTACTTATTAACCAATAGGATTAAGAAACAGATGAC 1922  
Qy 2019 AGATTATCATTTGATCAAGTATCCATTTAGTGGCGTGTATTCGGATTAATTCGCTT 2078  
Db 1923 GGAATTATCATTTGATCAAGTATCCATTTAGTGGATTTGTTATCAGATGATTTGCT 1982  
Qy 2079 AGATGAAGAAGAAATTAATTAAGAAAGTGAATATGCAAAAGCACTCAGTATGAAG 2138  
Db 1983 GGAATGAAGAAGAAATTAATTAAGAAAGTGAATATGCAAAAGCACTCAGTATGAGCG 2042  
Qy 2139 AATCTTAATCCAGATCCAACTTCACTCATCAATTAACCAACCAAGCTTCATATCTAC 2198  
Db 2043 GAATTTACTTCAAGATCCAACTTCAAGGATCAATTAAGCACTAGAC----- 2091  
Qy 2199 TAATGAGCAATCGAATTCATCATCTATCATGAACAATGCAATGATGATGGGAG 2258  
Db 2092 -----CGTGTGGAAGAGAG 2108  
Qy 2259 TGAGAACTTATCAATCCAGAGAAATGAAGTATTAAGAAATTAACCTCACTACC 2318  
Db 2109 TACGGAATATTAACATCCAAAGAGAGATGAGTATTCAAAGAAATTAATGATCACTACC 2168  
Qy 2319 GGGGACTTTTAAGAAGTATTAATCCGAGTATTTATCAAAAAATAGAGAGTCCGAAT 2378  
Db 2169 AGGTACTTTGAAGAGTATCAATCAATTTGTATCAAAAAATGATTAATCAAAAT 2228  
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Db 2289 CTAATTAATTCGCTAACCAATGCAAAATGCAAAATGATGATTCGAGTATCCGTTCTT 2248  
Qy 2499 ATGCGCGCTTTCACTTTGAAGCCCAATCGAGAGTCCGAGAAACCAATGATGCGCAC 2558  
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Qy 2559 ACATTTGAATGCAATCTGATCTAGATTTGCTCTGCAAGATGGAAGAAATGTCGCA 2618  
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Qy 2619 TCATTCATCATTTCTCTTTGATTAATGATTAATGATGACAGACTTGCATGAGATCT 2678  
Db 2469 TCATTCATCATTTCTCTTTGATTAATGATTAATGATGACAGACTTGCATGAGATCT 2528  
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Db 2529 AGGTGTATGGGTGTATTAAGATTAAGACGCAAGAGTCCGCAAGCAAGCTAGGGAATCT 2588  
Qy 2739 GGAATTTATTAAGAAACCAATTAATGAGAAAGCACTGCTCGTGAAGAGAGAGCA 2798  
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Qy 2799 GAAAAATGAGAGCAAAAGTGAAGAAATCAATTTGAGAAACAAACGAGTATATACAG 2858  
Db 2649 GAAAAATGAGAGCAAAAGTGAAGAAATTTGAGAAACAAATATGCTTTATTAAGA 2708  
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Qy 2979 TCTGTCAAGATTAATCTGTATTAATCCGCGGTGTAAATGCGGAAATTTTGAAGATTAAGAG 3038  
Db 2829 TCTGTCAAGATGCTGTGTGTATTAATCCGCGGTGTAAATGCGGCTATTTTGAAGATTAAGAG 2888  
Qy 3039 TCGATTAATCAATGCAATCTCCCTATTAATGAGAGAAATGCTGTTAAATGCTGATTT 3098  
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Qy 3099 TAATTAATGATTAATGCAATGCTGTAATGTAAGAGGATGATGATGAT---ACAACAGAGCCA 3155  
Db 2949 TAATTAATGCTTATTCCTGCTGGAAGTGAAGGCAATGATGATGATGATGATGATGATGAT 3008  
Qy 3156 TCAACGTTCTGTCTTGTATTAATCCAGAAATGGAAGCAAGATGTCACAGCAATTCGCGT 3215  
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Qy 3216 CTGTCCGCGGCGGTGCTATTAATCCCTCGGTGTCACAGGCTTAAGAGGATTAAGAGAGG 3275  
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Qy 3276 TTGTGTAAATGATCAATGATTAATGCAAGCAATTAACGAACTTAATTAATTAATCTGTA 3335  
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Qy 3396 TACAGCAATGATTAATCCCGTAAATGCTGATTAATGAGATGATTAATGATTAATGATTA 3455  
Db 3249 AGAATAGAGAGGCGT-----ACACTTCTGTAATGAGAGATTAACGAAAGCTTCTTC 3302  
Qy 3456 AGCATCTGTAATTAATTAACCAACGATTAATGAAGAAACGATTAATGATTAATGATTAAT 3515  
Db 3303 CATTACAGCTGATTAATCCGCTCACTTAATGAAGAAATGATTAATGATTAATGATTAAT 3362  
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Search completed: May 24, 2005, 22:58:27  
Job time : 2035 secs

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QY	481	VHVPVYSWTHRSADRTNTHSSDSITQIPLVXSFNLNSGTSVVGSGPFTGGDIIRTNVGS	540
Db	481	VHVPVYSWTHRSADRTNTHSSDSITQIPLVXSFNLNSGTSVVGSGPFTGGDIIRTNVGS	540
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Db	541	VLSMGLNPNNTSLQRYRVRVRYAASQTMVLRYTVGGSFTFPQGFSTMSANESLTSQSR	600
QY	601	PAEPFVGISAGSGSQTAGISISNNAGROTFFHFDKIEFIPITATFELAEYDLERAQEAVALNF	660
Db	601	PAEPFVGISAGSGSQTAGISISNNAGROTFFHFDKIEFIPITATFELAEYDLERAQEAVALNF	660
QY	661	TNTNPRRLKTDVTVDYHIDQVSNLVACLSDBFCLEDBKRELLKXYAKLSDBERNLLQDPN	720
Db	661	TNTNPRRLKTDVTVDYHIDQVSNLVACLSDBFCLEDBKRELLKXYAKLSDBERNLLQDPN	720
QY	721	FTSINKQDPTISTNEQSNFTSIHSESEKGMWSENIITQOEGNDVCKENMYVTLPGTFNFCY	780
Db	721	FTSINKQDPTISTNEQSNFTSIHSESEKGMWSENIITQOEGNDVCKENMYVTLPGTFNFCY	780
QY	781	PTYLYQKIGSEBELKAYTRYQLRGYEDBSQDLEIYIIRYNAKHETLADVGTESVWPLSYES	840
Db	781	PTYLYQKIGSEBELKAYTRYQLRGYEDBSQDLEIYIIRYNAKHETLADVGTESVWPLSYES	840
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Db	841	PIGRCGEFNRCAPHEFNPNDDLCSCRDGEKCAHSHHPSLDIDICTDLHENTLGYWVYFK	900
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Db	901	IKTQEGHARLGNLEPIEEKPLLGELASRYKAEKKRQKREKLOLETTRYVYAEKAVDA	960
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QY	1021	LYDARVVKNGDFNNGLACWNYKGVADVQOQSHRSVLVIPEKEAVSQAVRVCPRGYTL	1080
Db	1021	LYDARVVKNGDFNNGLACWNYKGVADVQOQSHRSVLVIPEKEAVSQAVRVCPRGYTL	1080
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QY	1141	AGYEDAYEVDPTTASVNYKPYEEETRYTDVRRBNHCERYGVNYPPLPAGYWTKELEYFP	1200
Db	1141	AGYEDAYEVDPTTASVNYKPYEEETRYTDVRRBNHCERYGVNYPPLPAGYWTKELEYFP	1200
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Db	1201	ETDKWMEIGETGKFIYDSVEILLMBE 1228	
RESULT 2			
US-08-448-170-8			
; Sequence 8, Application US/08448170			
; Patent No. 5723758			
; GENERAL INFORMATION:			
; APPLICANT: Payne, Jewel			
; APPLICANT: Cumming, David A.			
; APPLICANT: Cannon, Raymond J.C.			
; APPLICANT: Narva, Kenneth E.			
; APPLICANT: Stelman, Steve			
; TITLE OF INVENTION: No. 5723758e1 Bacillus thuringiensis Isolate Denoted			

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? ? TITLE OF INVENTION: B.t. PS158C2, Active Against Lepidopteran Pests, and Genes
? ? TITLE OF INVENTION: Encoding Lepidopteran-Active Toxins
? ? NUMBER OF SEQUENCES: 10
? ? CORRESPONDENCE ADDRESS:
? ? ADDRESSEE: David R. Saliwanchik
? ? STREET: 2421 N.W. 41st Street, Suite A-1
? ? CITY: Gainesville
? ? STATE: Florida
? ? COUNTRY: USA
? ? ZIP: 32606
? ? COMPUTER READABLE FORM:
? ? MEDIUM TYPE: Floppy disk
? ? COMPUTER: IBM PC compatible
? ? OPERATING SYSTEM: PC-DOS/MS-DOS
? ? SOFTWARE: PatentIn Release #1.0, Version #1.25
? ? CURRENT APPLICATION DATA:
? ? APPLICATION NUMBER: US/08/448,170
? ? FILING DATE:
? ? CLASSIFICATION: 424
? ? PRIOR APPLICATION DATA:
? ? APPLICATION NUMBER: US 08/069,902
? ? FILING DATE: 01-JUNE-1993
? ? CLASSIFICATION: 424
? ? PRIOR APPLICATION DATA:
? ? APPLICATION NUMBER: US 07/759,247
? ? FILING DATE: 13-SEPT-1991
? ? CLASSIFICATION: 424
? ? ATTORNEY/AGENT INFORMATION:
? ? NAME: Saliwanchik, David R.
? ? REGISTRATION NUMBER: 31,794
? ? REFERENCE/DOCKET NUMBER: W/S 102D.C1
? ? TELECOMMUNICATION INFORMATION:
? ? TELEPHONE: (904) 375-8100
? ? TELEFAX: (904) 372-5800
? ? INFORMATION FOR SEO ID NO.: 8
? ? SEQUENCE CHARACTERISTICS:
? ? LENGTH: 1227 amino acids
? ? TYPE: amino acid
? ? STRANDEDNESS: single
? ? TOPOLOGY: linear
? ? MOLECULE TYPE: peptide
US-08-448-170-8

Query Match          91.5%; Score 5926.5; DB 1; Length 1227;
Best Local Similarity 91.8%; Pred. No. 0;
Matches 1129; Conservative 36; Mismatches 60; Indels 5; Gaps 3;

QY      1 LTSNKNENEIINALSTAVNSHSTOMLSPARIEDSLCTABGNININLVASATVQTGI 60
DB      1 LTNKKNENEBEIIINALSIPAVSNHSQAQMNSTDAKIEDSLCTAEGNNIDPFVASATVGTGI 60
QY      61 NIAGRIILGVLPFGPAGOTASFYSFLVGELMPGRDOMEIFLEHVBNLIHQQTENAKRTA 120
DB      61 NIAGRILVLGVFPFGQIASFTYSFLVGEIMPRGRDPWEIFLEHVEQLIHQQVTENTKDTA 120
QY      121 LARIQGLGDSFRPAVQOQSLEDWLENRDARTSRVLYTOYIALBELDFNAMLPFAIRNQEV 180
DB      121 LARIQGLGNSFRPAVQOQSLEDWLENRDARTSRVLYTOYIALBELDFNAMLPFAIRNQEV 180
QY      161 LLMTVAQAANTHLHLRLDASLFGSFEGLTSGQIQRYERQVEQCTDYSYCCEWTYTGIN 240
DB      161 LLMTVAQAANTHLHLRLDASLFGSFEGLTSGQIQRYERQVEQCTDYSYCCEWTYTGIN 240
QY      181 LLMTVAQAANTHLHLRLDASLFGSFEGLTSGQIQRYERQVEQCTDYSYCCEWTYTGIN 240
DB      181 LLMTVAQAANTHLHLRLDASLFGSFEGLTSGQIQRYERQVEQCTDYSYCCEWTYTGIN 240
QY      241 SLRGNAASWVRYNQFRDDLTLGVLDVALPFSYDTRTYPINTSAQLTEBVTDAIGATG 300
DB      241 NLRGNAASWVRYNQFRDDLTLGVLDVALPFSYDTRTYPIPMNTSAQLTREITTDPLGRTN 300
QY      301 V--NMASNMWYNNAPPSFSALETAVIRSPHLADPLEOLTFSTSSRWASATRHMTWRGHT 358
DB      301 APSGFASINWFENNAPPSFSAIEAAVIARPHLLDPFEQLTIFSVLSRWSMTQYMNWVGH 360
QY      359 IQSRPIGGGLNTTHGSTNTSINPVRLSFSDRVYWTESYACVALLMGLEYLPIHGVPYVR 418

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Db 361 LBSRTIRGSLSTHGTNTSINPVLQFTSRDVRTSPAGINI--LITTPNAGVPMAR 418
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Db 419 FNRNPONTERTGANTASQPESEFGLOKJSETELPEPPERPYASYSRLSHIGLSIQ 478
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Db 479 SRHVHPYASYSRLSHIGLSIQPESEFGLOKJSETELPEPPERPYASYSRLSHIGLSIQ 478
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Db 539 GSVLNMGANFNNTSLQRYRVRVRAASQTVLRTVYGSSTFPDGPSTMSANESLSOS 598
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Db 719 PNTFSINKOPDPISTNEQSNFTSIHQSEHGMWSENIITOEQNDVPEKNYVTLPGTFNE 778
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Db 779 CYPTLYYOKIGSELKAYTRVYOLRGYLEDSDLEIYLIRYNAKHTLDVPGTESWMLSV 838
Qy 839 ESPRIGCGEENRCAPHEENPDDDCSCRODEKCAHSHHSLSLDIDICTDLHENTLGVWV 898
Db 839 ESPRIGCGEENRCAPHEENPDDDCSCRODEKCAHSHHSLSLDIDICTDLHENTLGVWV 898
Qy 899 FKKTQEGHARLGNLEFIEEKPILGELSRVKAABKRRKRELOLETKRVTYEAKEAV 958
Db 899 FKKTQEGHARLGNLEFIEEKPILGELSRVKAABKRRKRELOLETKRVTYEAKEAV 958
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Db 959 DALFVDSQVNRLOADTNIGMIRHADKLVHRIREAVISELSVIRGVNAIEFELEGRIITA 1018
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Qy 1199 FPETDKWIEIGTEGKFIYDSVELLMEE 1228
Db 1199 FPETDKWIEIGTEGKFIYDSVELLMEE 1228

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RESULT 3
US-08-961-803-9
Sequence 9, Application US/08961803
Patent No. 6150589
GENERAL INFORMATION:
APPLICANT: Payne, Jewel
APPLICANT: Cummings, David A.
APPLICANT: Cannon, Raymond J.C.
APPLICANT: Narva, Kenneth E.
APPLICANT: Steilman, Steve
TITLE OF INVENTION: No. 6150589el Bacillus thuringiensis Isolate Denoted
TITLE OF INVENTION: B.t. Pst5862, Active Against Lepidopteran Pests, and Genes
TITLE OF INVENTION: Encoding Lepidopteran-Active Toxins
NUMBER OF SEQUENCES: 10

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CORRESPONDENCE ADDRESS:
ADDRESSER: Jay M. Sanders
STREET: 2421 N.W. 41st Street, Suite A-1
CITY: Gainesville
STATE: Florida
COUNTRY: USA
ZIP: 32606
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/961,803
CLASSIFICATION: 800
FILING DATE: 01-JUNE-1993
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 08/069,902
CLASSIFICATION: 800
FILING DATE: 07/759,247
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 08/448,170
FILING DATE: 23-MAY-1995
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Sanders, Jay M.
REGISTRATION NUMBER: 39,355
REFERENCE/DOCKET NUMBER: M/S 102DCD1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (352) 375-8100
TELEFAX: (352) 372-5800
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 1227 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-961-803-9
Query Match 91.5%; Score 5926.5; DB 3; Length 1227;
Best Local Similarity 91.8%; Pred. No. 0;
Matches 1129; Conservative 36; Mismatches 60; Indels 5; Gaps 3;
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Db 1 LTSNRKNEIINALSIPAVSNHSTOWDLSPPARIEDSLCIAAGNNINPLVASTVQGI 60
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Db 61 NINGRILGVGVPPAGCIASFYFLVGEMLPRGRDQWEILEHVEQLINQITENARNTA 120
Qy 61 NINGRILGVGVPPAGCIASFYFLVGEMLPRGRDQWEILEHVEQLINQITENARNTA 120
Db 61 NINGRILGVGVPPAGCIASFYFLVGEMLPRGRDQWEILEHVEQLINQITENARNTA 120
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Db 121 LARLOGAGSFRAYQOGLSDWMLNRRDARTSVLYTQYIALDELFLNAPMLPAIRNOEVP 180
Qy 181 LLMVYAQAANTLHLLLRDASLFGSEFGLTSGEIQRYREROVEQTRDYSDEVCEMYNTGLN 240
Db 181 LLMVYAQAANTLHLLLRDASLFGSEFGLTSGEIQRYREROVEQTRDYSDEVCEMYNTGLN 240
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Db 301 ABGCFASITNFRNNAFSAIETAVIRSPHLDFLEOLITFSTSRASATRHMTYMRGHT 358
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Db	718	PNFTSINKQDPFISTNEQSNTFSIHEOSEHOMGSENTTIOEGNDVKEKNVYTLPGTFNE	777
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RESULT 4
US-09-661-322A-63
; Sequence 63, Application US/09661322A
; Patent No. 6593293
; GENERAL INFORMATION:
; APPLICANT: Baum, James A.
; APPLICANT: Chu, Chih-Rei
; APPLICANT: Donovan, William P.
; APPLICANT: Gilmer, Amy J.
; APPLICANT: Rudar, Mark J.
; TITLE OF INVENTION: Lepidopteran-Active Bacillus thuringiensis Delta-Endotoxin Compositions
; TITLE OF INVENTION: and Methods of Use
; FILE REFERENCE: MECO201

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```

? CURRENT APPLICATION NUMBER: US/09/661,322A
? CURRENT FILING DATE: 2000-09-13
? NUMBER OF SEQ ID NOS: 63
? SOFTWARE: patentIn version 3.0
? SEQ ID NO 63
? LENGTH: 1227
? TYPE: PRT
? ORGANISM: Bacillus thuringiensis
? US-09-661-322A-63

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Query March		91.3%	Score 5912.5	DB 4	Length 1227																													
Best Local Similarity		91.6%	Pred. No. 0																															
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Gaps						3																												
QY	1	LTSNRKNEIINLALSI	IPAVSNHSTOMD	LSPADI	EDSLCIAEGNNINPLVASITVGTGI	60																												
Db	1	LTSNRKNEIINLALSI	IPAVSNHSAQNM	LSTDADIEDSLCIAEGNNIDIPVASITVGTGI	60																													
QY	61	NIAGRILIGVGP	PAGQIASFYS	TVGELMWRGDDWEH	FLFHEVQLINQOITENARNTA	120																												
Db	61	NIAGRILIGVGP	PAGQIASFYS	TVGELMWRGDDWEH	FLFHEVQLINQOITENARNTA	120																												
QY	121	LARIQGGDSFRA	QQQSIEDML	ENRDKARTSV	YTOYIALELPFLNMPFLAINQGEVP	180																												
Db	121	LARIQGGDSFRA	QQQSIEDML	ENRDKARTSV	YTOYIALELPFLNMPFLAINQGEVP	180																												
QY	181	LIMVYAQAANLHL	LLLDASLFGSE	FGILTSQGEI	QRYERYOQETRDSDYCEVMTNGIN	240																												
Db	181	LIMVYAQAANLHL	LLLDASLFGSE	FGILTSQGEI	QRYERYOQETRDSDYCEVMTNGIN	240																												
QY	241	SLRGTTAAASV	RNVNQFRRDL	TLGVLD	VALPSPSIDTRYPINTSAQLTRFVYTDAIGATG	300																												
Db	241	SLRGTTAAASV	RNVNQFRRDL	TLGVLD	VALPSPSIDTRYPINTSAQLTRFVYTDAIGATG	300																												
QY	301	V--SMASNNYNN	NAPSPSAIET	IVIRSPHLLD	PLEOULTFSTSSRMSGATRMATWRGHT	358																												
Db	301	APSPGASTNN	FNNNAPSPSAI	EAIVIRPHLLD	PEBOLITISVLSRMSNTQYMMYVGH	360																												
QY	359	IQSRPIGGGL	NTSTHGS	TNTSIN	EVRLSPFSRDVYMTESVAGVLLMGITLPIHGVPTR	418																												
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QY	419	FNPNPQPT	FPRGTANT	QSPYES	GLQKQSETELPEPTTERRPNYESHSLSHLIGLSQ	478																												
Db	419	FNPNPQPT	FPRGTANT	QSPYES	GLQKQSETELPEPTTERRPNYESHSLSHLIGLSQ	478																												
QY	479	SRVAVPY	SWTHR	ADRN	TSSDSITQIPLVKSFNLSGTSVVS	PGPFTGGDIRTNV	538																											
Db	478	NTLPAVYS	WTHR	ADRN	TSSDSITQIPLVKSFNLSGTSVVS	PGPFTGGDIRTNV	537																											
QY	539	GSVL	SMGLNF	NNSTL	ORRYVRVRYAASQ	TWVLRYTVGGSITTFDQFPSTMSANESLTSQS	598																											
Db	538	GSVL	SMGLNF	NNSTL	ORRYVRVRYAASQ	TWVLRYTVGGSITTFDQFPSTMSANESLTSQS	597																											
QY	599	FRFAPF	VGIS	ASGSQ	TRAGISISNNAG	QOTHFDPKIEPIPTTATREAYDLERAOEAVNA	658																											
Db	598	FRFAPF	VGIS	ASGSQ	TRAGISISNNAG	QOTHFDPKIEPIPTTATREAYDLERAOEAVNA	657																											
QY	659	LFTN	TNPR	RLT	VDYD	YHIDQVSNLV	CLSPCLMDEGRELLEKVKYAKRLSDENLLOD	718																										
Db	658	LFTN	TNPR	RLT	VDYD	YHIDQVSNLV	CLSPCLMDEGRELLEKVKYAKRLSDENLLOD	717																										
QY	719	PNF	TSINK	QDP	FI	STNEQ	SNFTS	IHEQSEHGMGSENITIOBGNDVFKENYVTLPGTFNE	778																									
Db	718	PNF	TSINK	QDP	FI	STNEQ	SNFTS	IHEQSEHGMGSENITIOBGNDVFKENYVTLPGTFNE	777																									
QY	779	CYPT	LYL	YOKIG	ESL	KATRY	Q	NGYIFEDSODL	LYLIRYNAKHETLDVPGTESWPLSV	838																								
Db	778	CYPT	LYL	YOKIG	ESL	KATRY	Q	NGYIFEDSODL	LYLIRYNAKHETLDVPGTESWPLSV	837																								
QY	839	ESP	IGR	GE	EP	PR	CA	PHFEM	NP	DL	OS	CR	DG	K	CA	H	SH	PS	L	D	I	G	C	T	D	L	H	E	N	G	V	V		898
Db	838	ESP	IGR	GE	EP	PR	CA	PHFEM	NP	DL	OS	CR	DG	K	CA	H	SH	PS	L	D	I	G	C	T	D	L	H	E	N	G	V	V		897

QY 899 FKIKTQGHARLGNLEIEEPLLEALSRVRAEKWRDREKLOETKRVYTEAEAV 958  
 DB 898 FKIKTQGHARLGNLEIEEPLLEALSRVRAEKWRDREKLOETKRVYTEAEAV 957  
 QY 959 DALFVDSQVNRLOADNTIGMHADKLVHRIREAVYLSLSYIPGVNAIEPELEGRIITA 1018  
 DB 958 DALFVDSQVNRLOADNTIGMHADKLVHRIREAVYLSLSYIPGVNAIEPELEGRIITA 1017  
 QY 1019 ISLYDANVYVNGDFNNGLACMNVKGVHDVQOSHRSVLVPEWEAEVSQAVRCPGRGY 1078  
 DB 1018 ISLYDANVYVNGDFNNGLACMNVKGVHDVQOSHRSVLVPEWEAEVSQAVRCPGRGY 1077  
 QY 1079 ILKVTAYKSGYGGSCVTIHEIENNTDELKFNKCEEEVPTDGTGNDYTAHQGTAVCNS 1138  
 DB 1078 ILKVTAYKSGYGGSCVTIHEIENNTDELKFNKCEEEVPTDGTGNDYTAHQGTAVCNS 1137  
 QY 1139 RNAGYEDAYEVDTTASVNYKPTVEETVYTRBNHCEYRGVNYVPLPAGVWTKLEY 1198  
 DB 1138 RNAGYEDAYEVDTTASVNYKPTVEETVYTRBNHCEYRGVNYVPLPAGVWTKLEY 1197  
 QY 1199 FPETDKVIEIGETGEKFIYDSVELLMEER 1228  
 DB 1198 FPETDKVIEIGETGEKFIYDSVELLMEER 1227

RESULT 5  
 US-07-951-715A-7  
 Sequence 7, Application US/07951715A  
 Patent No. 5625136  
 GENERAL INFORMATION:  
 APPLICANT: Kozziel, Michael G.  
 APPLICANT: Deesal, Nalin M.  
 APPLICANT: Lewis, Kelly S.  
 APPLICANT: Kramer, Vance C.  
 APPLICANT: Warren, Gregory W.  
 APPLICANT: Evola, Stephen V.  
 APPLICANT: Crossland, Lyle D.  
 APPLICANT: Wright, Martha S.  
 APPLICANT: Merilin, Ellis J.  
 APPLICANT: Launie, Karen L.  
 APPLICANT: Rothelein, Steven J.  
 APPLICANT: Bowman, Cindy G.  
 APPLICANT: Dawson, John L.  
 APPLICANT: Dunder, Erik M.  
 APPLICANT: Pace, Gary M.  
 APPLICANT: Suttie, Janet L.  
 TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
 TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE  
 NUMBER OF SEQUENCES: 94  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: CIBA-GEIGY Corporation  
 STREET: 7 Skyline Drive  
 CITY: Hawthorne  
 STATE: New York  
 COUNTRY: USA  
 ZIP: 10532  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: floppy disk  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: Patentin Release #1.0, Version #1.30B  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/07/951,715A  
 FILING DATE: 25-SEP-1992  
 CLASSIFICATION: 800  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: US 07/772,027  
 FILING DATE: 04-OCT-1991  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Spruiell, W. Murray  
 REGISTRATION NUMBER: 32,943  
 REFERENCE/DOCKET NUMBER: S-18805/A/CGC 1577/CIP

TELECOMMUNICATION INFORMATION:  
 TELEPHONE: (919) 541-8615  
 TELEFAX: (919) 541-8689  
 INFORMATION FOR SEQ ID NO: 7:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 1207 amino acids  
 TYPE: amino acid  
 TOPOLOGY: linear  
 MOLECULE TYPE: protein  
 US-07-951-715A-7

Query Match 87.4%; Score 5659.5; DB 1; Length 1207;  
 Best Local Similarity 89.4%; Pred. No. 0;  
 Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

QY 27 MDLSPDRIEDSLCIAENNNINPLVYSASTVQTGINAGRIIGVLPFAGQIASFYFLV 86  
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 QY 87 GELMPGRDQWEIPLFHEVBOILNQOITENANRALTALOGIGDSFRAVYQOSLEBDLENRD 146  
 DB 61 GELMPGRDQWEIPLFHEVBOILNQOITENANRALTALOGIGDSFRAVYQOSLEBDLENRD 120  
 QY 147 DARTRSVLYTOYIALAEIDFLANPFLAIRNOEVLPLMVYQANLHLILLRDLASLFGSEF 206  
 DB 121 DARTRSVLYTOYIALAEIDFLANPFLAIRNOEVLPLMVYQANLHLILLRDLASLFGSEF 180  
 QY 207 GLTSQEIORYEBOVEQTRDYSDYCEWNTYNTGLSLGTNAASVVRNORPDLTLGLVD 266  
 DB 181 GLTSQEIORYEBOVEQTRDYSDYCEWNTYNTGLSLGTNAASVVRNORPDLTLGLVD 240  
 QY 267 LVALLFSPYDRTYPIINTSAQLTREVTYDAIGATGVNNAAMVYNNAPSPSAIETAVIRS 326  
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 QY 327 PHLLDFLEQLTIFSTSRMSATRMVYRGHTIQSRPIGGALNTSTHGTNTSINPYRLS 386  
 DB 301 PHLLDFLEQLTIFSTSRMSATRMVYRGHTIQSRPIGGALNTSTHGTNTSINPYRLS 360  
 QY 387 FFSRDVYTWESYAGVLLMGVLYRPIHGVPTVRFRNRPONTFERCTANYQPYSPGLQL 446  
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 QY 447 KOSETELPPTTRPNYESYSHLSHIGLISQSRVAVPVYSMTKRSADRTNTSSDSITQ 506  
 DB 421 KOSETELPPTTRPNYESYSHLSHIGLISQSRVAVPVYSMTKRSADRTNTIGPNITQ 480  
 QY 507 IPLVKSFNLSGTSVSGPGFTGGDIIIRTVNGSVLSMGLFNNTSLQRYRVRVYASQ 566  
 DB 481 IPLVKSFNLSGTSVSGPGFTGGDIIIRTVNGSVLSMGLFNNTSLQRYRVRVYASQ 540  
 QY 567 TMTLRYTVGSGTTPDQFPSTMSANESLTQSRRFAFPYGISASGQ-1AGISISNNA 625  
 DB 541 DFDFFVSRGGTIVNNFFLRTNMSGDELKYNFVRRAFTTPTFTQDIIIRTSIQGLSG 600  
 QY 626 RQTFHPDKIEFIPITATFEAEYDLERAQAVNALFTTNPRRLTDTVDTHIDVSNLVA 685  
 DB 601 NGEVYIDKIEIIPVATFEAEYDLERAQAVNALFTTNPRRLTDTVDTHIDVSNLVA 660  
 QY 686 CLSDEFCLDEKRELLEKVKYAKRLSDERNLLQDPNFTSINKQDPFISTNQSNTSIHQ 745  
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 QY 746 SEHGWNQSENIITQOENGVDKENVYVTLPGTFNCEYPTVLYOKIGESTLKYTYOLAGYI 805  
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 QY 806 EDSQDLLEYIIRNNAKHETLDVGTESVWPLSVESPIGRGCEPRNCAPHFEMNPDLDCSC 865  
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 QY 866 RDEKCAHSHHESLDIDIGCTDLHENTLGVVVFVKIKTQGHARLGNLEIEEPLLEGEA 925

Db 841 RDEKCAHSHSHSLDIDVCTDHLNLTGVWVFKITQEGHARLGNLFIEEKPILGEA 900  
Qy 926 LSRVKAEEKMRDKREKLOLETRVYTAKEAVDALFVDSQYNNLOADTNGIHAADKI 985  
Db 901 LSRVKAEEKMRDKREKLOLETRVYTAKEAVDALFVDSQYNNLOADTNGIHAADKI 960  
Qy 986 VHRIRAVYSELVIGVNAEIEELEGRIITLISLYDANVYKNDPNNGLACNVKCH 1045  
Db 961 VHRIRAVYSELVIGVNAEIEELEGRIITLISLYDANVYKNDPNNGLACNVKCH 1020  
Qy 1046 VDVQSHHSVLYIPMEAEVSAVRCVPGYILRTVAYKEGSGCVTIHEIENNTDE 1105  
Db 1021 VDVQSHHSVLYIPMEAEVSAVRCVPGYILRTVAYKEGSGCVTIHEIENNTDE 1080  
Qy 1106 LKFKNCEEEVYPTDGTCTNDYTAHQGTAAA---VCNSRNAGYDAVEVDTTASVNYKPTV 1161  
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Db 1141 EEEYTYDVRDNCEDRGVYVNPPLPAGYMTKELEFPETDKVMTIEIGTECKTIVDSV 1200  
Qy 1222 ELLLMEE 1228  
Db 1201 ELLLMEE 1207

RESULT 6

US-08-459-448A-7  
Sequence 7, Application US/08459448A  
Patent No. 5859336

GENERAL INFORMATION:

APPLICANT: Kozielec, Michael G.  
APPLICANT: Desai, Nalini M.  
APPLICANT: Lewis, Kelly S.  
APPLICANT: Kramer, Vance C.  
APPLICANT: Warren, Gregory W.  
APPLICANT: Evola, Stephen V.  
APPLICANT: Crossland, Lyle D.  
APPLICANT: Wright, Martha S.  
APPLICANT: Merlino, Ellis J.  
APPLICANT: Launius, Karen L.  
APPLICANT: Rothstein, Steven J.  
APPLICANT: Bowman, Cindy G.  
APPLICANT: Dawson, John L.  
APPLICANT: Dunder, Erik M.  
APPLICANT: Pace, Gary M.  
APPLICANT: Surtie, Janet L.  
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE  
NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: No. 5859336artis Corporation  
STREET: Patent & Trademark Dept., 520 White Plains  
STREET: Rd., POB 2005  
CITY: Tarrytown  
STATE: New York  
COUNTRY: USA  
ZIP: 10591-9005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459,448A  
FILING DATE: 02-JUN-1995  
CLASSIFICATION: 800  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/951,715  
FILING DATE: 25-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/772,027

US-08-459-448A-7  
Sequence 7, Application US/08459448A  
Patent No. 5859336  
GENERAL INFORMATION:  
APPLICANT: Kozielec, Michael G.  
APPLICANT: Desai, Nalini M.  
APPLICANT: Lewis, Kelly S.  
APPLICANT: Kramer, Vance C.  
APPLICANT: Warren, Gregory W.  
APPLICANT: Evola, Stephen V.  
APPLICANT: Crossland, Lyle D.  
APPLICANT: Wright, Martha S.  
APPLICANT: Merlino, Ellis J.  
APPLICANT: Launius, Karen L.  
APPLICANT: Rothstein, Steven J.  
APPLICANT: Bowman, Cindy G.  
APPLICANT: Dawson, John L.  
APPLICANT: Dunder, Erik M.  
APPLICANT: Pace, Gary M.  
APPLICANT: Surtie, Janet L.  
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE  
NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: No. 5859336artis Corporation  
STREET: Patent & Trademark Dept., 520 White Plains  
STREET: Rd., POB 2005  
CITY: Tarrytown  
STATE: New York  
COUNTRY: USA  
ZIP: 10591-9005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459,448A  
FILING DATE: 02-JUN-1995  
CLASSIFICATION: 800  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/951,715  
FILING DATE: 25-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/772,027

FILING DATE: 04-OCT-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Pace, Gary M.  
REGISTRATION NUMBER: 40403  
REFERENCE/DOCKET NUMBER: CGC 1577/CIP/DIVA  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (919)541-8582  
TELEFAX: (919)541-8689  
INFORMATION FOR SEQ ID NO: 7:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1207 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-459-448A-7  
Query Match 87.4%; Score 5659.5; DB 2; Length 1207;  
Best local similarity 89.4%; Pred. No. 0;  
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;  
Qy 27 MDLSPARIEDSLCIAEGNNINPLVSAFTVQGINIAGRIILGVLPFAQQLASFTSFLV 86  
Db 1 MDLSPARIEDSLCIAEGNNIDPFVSAFTVQGINIAGRIILGVLPFAQQLASFTSFLV 60  
Qy 87 GELMPRGDQWELFLEHVEQLINQOITENARNTALRLGLDGFPAQOQLSDMTENRD 146  
Db 61 GELMPRGDQWELFLEHVEQLINQOITENARNTALRLGLDGFPAQOQLSDMTENRD 120  
Qy 147 DARTSVLYTOYLAELDFLAMPPLFAINNOEVLIMVYAQAANHLILLRDSALFSGSEF 206  
Db 121 DARTSVLYTOYLAELDFLAMPPLFAINNOEVLIMVYAQAANHLILLRDSALFSGSEF 180  
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Db 181 GLTSQEIQRYYEROVQCTEDYSDYCYEWNTGINSRGTAASWRYNFRRLTIGVLD 240  
Qy 267 LVALPSPYDTRTYPINTSAQLTREVTDAIGATGVMAASNNVNNNAAPSAIETAVIRS 326  
Db 241 LVALPSPYDTRTYPINTSAQLTREVTDAIGATGVMAASNNVNNNAAPSAIETAVIRS 300  
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Db 301 PHLLDFLEQLITFSTSRMSATRHMTYRGHTIQSRPIGGGLNTSYHSGTNTSINPVRLS 360  
Qy 387 PFSRDVYWTESYAGVILMGIIYEPHGVPTVRFPNPNPONTFERGTANTSOPIESFGLQL 446  
Db 361 PFSRDVYWTESYAGVILMGIIYEPHGVPTVRFPNPNPONTFERGTANTSOPIESFGLQL 420  
Qy 447 KQSETELPETTERPYVESYSHLSHIGLISOSRVVPPVSWTHRSADRNTTSSDSITQ 506  
Db 421 KQSETELPETTERPYVESYSHLSHIGLISOSRVVPPVSWTHRSADRNTTSSDSITQ 480  
Qy 507 IPLVKSFNINSGTSVSGPFTGDDIIRTNVNSVLSMGLNFNTSLQRYRVRVYASQ 566  
Db 481 IPLVKSFNINSGTSVSGPFTGDDIIRTNVNSVLSMGLNFNTSLQRYRVRVYASQ 540  
Qy 567 TMYLRTVGSSTFEDGPPSTMSANESLTSQSFRAEPFVYGISASGQ-TAGISINNAQ 625  
Db 541 TMYLRTVGSSTFEDGPPSTMSANESLTSQSFRAEPFVYGISASGQ-TAGISINNAQ 600  
Qy 626 RQTFHFDKLEFIPITATFEAEYDLERAQAVNALFTNTPRRKTKTVTDVTHIDQVNSLVA 685  
Db 601 RQTFHFDKLEFIPITATFEAEYDLERAQAVNALFTNTPRRKTKTVTDVTHIDQVNSLVA 660  
Qy 686 CLSDEFCLDEKRELEKRYAKRLSDERMLADPNFTSINKOPDFTSYEQSNFTSIHQ 745  
Db 661 CLSDEFCLDEKRELEKRYAKRLSDERMLADPNFTSINKOPDFTSYEQSNFTSIHQ 720  
Qy 746 SEHGWSGSENITIQEGNDVFKENYVTLPGTFNECYFTYLYQKIGSELKAYTRYQLRGYI 805  
Db 721 SEHGWSGSENITIQEGNDVFKENYVTLPGTFNECYFTYLYQKIGSELKAYTRYQLRGYI 780  
Qy 806 EDSQDLEIYLIRNAGHFLDVGCTESWPLASVESFIKRGCEPNNRCAPIHEMNPDDLDSC 865

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Db      781 EDSDLEIYIRIRNAKETTIDVPTESLWPLSTSPIGRCSEPNKCAPIHEWNPDLJOSC 840
Qy      866 RDEKCAHSHHSLSLDIDIGCTDLHENLGVVWVFKITQEGHARLGNLFEIEKPLLGEA 925
Db      841 RDEKCAHSHHSLSLDIDVGCTDLHENLGVVWVFKITQEGHARLGNLFEIEKPLLGEA 900
Qy      926 LSRVKAERKWRDREKQLQETKRVYTBKAEADALVDSQYRNLQADNTIGMHAADKL 985
Db      901 LSRVKAERKWRDREKQLQETKRVYTBKAEADALVDSQYRNLQADNTIGMHAADKL 960
Qy      986 VHRIRAYLSLSLPGVNAIEPELEGRITTAISLDARVNVNGSPNNGLACWVNGH 1045
Db      961 VHRIRAYLSLSLPGVNAIEPELEGRITTAISLDARVNVNGSPNNGLACWVNGH 1020
Qy      1046 VDVQSHHRSVLVPEWEAEVSAVRCVPGRGYLLRTAYKEGEGECVTIHEIENNTDE 1105
Db      1021 VDVQSHHRSVLVPEWEAEVSAVRCVPGRGYLLRTAYKEGEGECVTIHEIENNTDE 1080
Qy      1106 LKFKNCEEEVYPTDGTGNDYTAHQGTAAA--VCNSRNAGYEDAYEVDTTASVNYKPT 1161
Db      1081 LKFKNCEEEVYPTDGTGNDYTAHQGTAAA--VCNSRNAGYEDAYEVDTTASVNYKPT 1140
Qy      1162 EESTYTDVRDNCCEVGRGVNVPPLPAGTMTKLEFPETDKWMITGTEGKFIYDSV 1221
Db      1141 EESTYTDVRDNCCEVGRGVNVPPLPAGTMTKLEFPETDKWMITGTEGKFIYDSV 1200
Qy      1222 ELLLMER 1228
Db      1201 ELLLMER 1207

```

RESULT 7  
US-08-459-595A-7  
Sequence 7, Application US/08459595A  
Patent No. 6018104

## GENERAL INFORMATION:

```

APPLICANT: Koziel, Michael G.
APPLICANT: Desai, Nalin M.
APPLICANT: Lewis, Kelly S.
APPLICANT: Kramer, Vance C.
APPLICANT: Warren, Gregory W.
APPLICANT: Ewola, Stephen V.
APPLICANT: Crossland, Lyle D.
APPLICANT: Wright, Martha S.
APPLICANT: Merlin, Ellis J.
APPLICANT: Launis, Karen L.
APPLICANT: Rothschein, Steven J.
APPLICANT: Bowman, Cindy G.
APPLICANT: Dawson, John L.
APPLICANT: Dunder, Erik M.
APPLICANT: Pace, Gary M.
APPLICANT: Suttie, Janet L.
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 6018104artis Corporation
STREET: Patent & Trademark Dept., 520 White Plains
CITY: Tarrytown
STATE: New York
COUNTRY: USA
ZIP: 10591-9005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/459-595A
FILING DATE: 02-JUN-1995
CLASSIFICATION: 800

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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Pace, Gary M.
REGISTRATION NUMBER: 40403
REFERENCE/DOCKET NUMBER: CGC 1577/CIP/DIV3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8582
TELEFAX: (919)541-8582
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 1207 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-459-595A-7

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Query Match 87.4%; Score 5659.5; DB 3; Length 1207;  
Best Local Similarity 89.4%; Pred. No. 0;  
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

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Qy      27 MDLSPDARIDSLCIAEGNNINPLVSASTVQTGINAGRIIGVIGVPPAQIASFYSFLV 86
Db      1 MDLLPDARIDSLCIAEGNNIDPFVSASTVQTGINAGRIIGVIGVPPAQIASFYSFLV 60
Qy      87 GELMPGRDQWEIFLEHVEQLINQITENARNALALQIGDSFRAYQOSLEWLENRD 146
Db      61 GELMPGRDQWEIFLEHVEQLINQITENARNALALQIGDSFRAYQOSLEWLENRD 120
Qy      147 DARTSVLYTQYALBELDFNAMPFAIRNOEVLMTVAQAAHLHLRLDASLFGSEF 206
Db      121 DARTSVLYTQYALBELDFNAMPFAIRNOEVLMTVAQAAHLHLRLDASLFGSEF 180
Qy      207 GLTSOEIQRYERQVQTRDSDYCVEMVNTGLNSLGTNAASVVRYNQFRDLTLGLVD 266
Db      181 GLTSOEIQRYERQVQTRDSDYCVEMVNTGLNSLGTNAASVVRYNQFRDLTLGLVD 240
Qy      267 LVALLPESYDRTTPINTSAQLTREVTDAIGATGVNMAKWNVNNAPSSAIEFTAVIRS 326
Db      241 LVALLPESYDRTTPINTSAQLTREVTDAIGATGVNMAKWNVNNAPSSAIEFTAVIRS 300
Qy      327 PHLLDFLEQLTIFSTSSRWGATRMVYRGHTIOSRPIGGGLNTSTHGSNTSINPVRLS 386
Db      301 PHLLDFLEQLTIFSTSSRWGATRMVYRGHTIOSRPIGGGLNTSTHGSNTSINPVRLS 360
Qy      387 FFSRDVYMTESYAGVILMGYILEPIHGVPTVRFNRPQNTFERGTANYSQPYESPQLQL 446
Db      361 FASRDVYMTESYAGVILMGYILEPIHGVPTVRFNRPQNTFERGTANYSQPYESPQLQL 420
Qy      447 KQSETELPETTERPNYESYSHLSHIGLISGRVHVVPVYSWTHRSADRTNTSSDSITQ 506
Db      421 KQSETELPETTERPNYESYSHLSHIGLISGRVHVVPVYSWTHRSADRTNTGPNRITQ 480
Qy      507 IPIVKSNNLSGVSUSGPGFTGDDIRTNVNSVLSMGLNFNTSIOQRVAVRYVAAQ 566
Db      481 IPIVKSNNLSGVSUSGPGFTGDDIRTNVNSVLSMGLNFNTSIOQRVAVRYVAAQ 540
Qy      567 TWLIRVVGSTTFDQGFPSPTMSANESLTSQSPFAEPVIGISASGQ-TAGISISNAG 625
Db      541 DPDPFVSRGTYTNRRFLRTMSGDELKXGNVRAFTTPPTPTQDILIRTSIOGLSG 600
Qy      626 RQTFHDKLIFPIYATFAEAYLEDAQEAVALFTNTNPRRLKTDYTHIDQVSNLVA 685
Db      601 NGEVYIDKIEIIVTATFEAYLEDAQEAVALFTNTNPRRLKTDYTHIDQVSNLVA 660
Qy      686 CLSDFCLDEKRELKVKYAKRLSDERNLADPNFTSINKOPDFTSTNOSNFTSHQ 745
Db      661 CLSDFCLDEKRELKVKYAKRLSDERNLADPNFTSINKOPDFTSTNOSNFTSHQ 720

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QY 746 SEHGAMGSENIITQEGNDVFKENYVTLPGTFNECTPTLYOKIGSESLKATYTRQIRGYI 805
DB 721 SEHGAMGSENIITQEGNDVFKENYVTLPGTFNECTPTLYOKIGSESLKATYTRQIRGYI 780
QY 806 EDSODLEIYLIRNAGHETLDVGTESVWPLSVESPIGRGCEPNRCAPEHNPDLDCSC 865
DB 781 EDSODLEIYLIRNAGHETLDVGTESVWPLSVESPIGRGCEPNRCAPEHNPDLDCSC 840
QY 866 ROGEKCAHSHHSLDIDIGCTDLHENTLGVWVFKIKTOGCHARLGNLEPIEEKPLLGEA 925
DB 841 ROGEKCAHSHHSLDIDIGCTDLHENTLGVWVFKIKTOGCHARLGNLEPIEEKPLLGEA 900
QY 926 LSRVKAEEKMRKREKQLETRVYVTEAKAVDALFVDSQVNRLOADNTNIGIHAADKL 985
DB 901 LSRVKAEEKMRKREKQLETRVYVTEAKAVDALFVDSQVNRLOADNTNIGIHAADKL 960
QY 986 VHRIRKAYISELVIKGVNAEIEELEGHITITSLYDANVYKNGDPNNGLCAWVKGH 1045
DB 961 VHRIRKAYISELVIKGVNAEIEELEGHITITSLYDANVYKNGDPNNGLCAWVKGH 1020
QY 1046 VDVQSHHSVLYIPEWEAEVSQAVRVCPRGYILRTAYAKBGVGCVTIHEIENNTDE 1105
DB 1021 VDVQSHHSVLYIPEWEAEVSQAVRVCPRGYILRTAYAKBGVGCVTIHEIENNTDE 1080
QY 1106 LKFKNCEEEVYPTDTGTCNDYTAHQGTAAA---VCSNRNAGYDAYBVDTTASVNTKPT 1161
DB 1081 LKFKNCEEEVYPTDTGTCNDYTAHQGTACADACNSRNAGYDAYBVDTTASVNTKPT 1140
QY 1162 EESTYTDVRDNCEYDRGVNYPPLPAGYMTKLEFEPETDKWIEIGETSEKFIYDSV 1221
DB 1141 EESTYTDVRDNCEYDRGVNYPPLPAGYMTKLEFEPETDKWIEIGETSEKFIYDSV 1200
QY 1222 ELLIMEE 1228
DB 1201 ELLIMEE 1207

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# RESULT 8 US-08-459-504B-7

Sequence 7, Application US/08459504B  
Patent No. 6075185

## GENERAL INFORMATION:

APPLICANT: Kozielec, Michael G.  
APPLICANT: Desai, Nalini M.  
APPLICANT: Lewis, Kelly S.  
APPLICANT: Kramer, Vance C.  
APPLICANT: Warren, Gregory W.  
APPLICANT: Evola, Stephen V.  
APPLICANT: Crossland, Lyle D.  
APPLICANT: Wright, Martha S.  
APPLICANT: Merlino, Ellis J.  
APPLICANT: Launius, Karen L.  
APPLICANT: Rothenstein, Steven J.  
APPLICANT: Bowman, Cindy G.  
APPLICANT: Dawson, John U.  
APPLICANT: Dunder, Erik M.  
APPLICANT: Pace, Gary M.  
APPLICANT: Sutcliffe, Janet L.  
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE  
NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: No. 6075185artis Corporation  
STREET: 3054 Cornwallis Road  
CITY: Research Triangle Park  
STATE: NC  
COUNTRY: USA  
ZIP: 27709

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30

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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/459,504B
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/459,595
FILING DATE: 02-JUN-1995
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Weig, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: CGC1577/CIP/DIV
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8587
TELEFAX: (919)541-8689
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 1207 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-459-504B-7

Query Match      87.4%; Score 5659.5; DB 3; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

QY 27 MDLSPARIEDSLCIAGNNINPLVSAVYQGINIAGRIKLVLPFAGQIASFYSFLV 86
DB 1 MDLSPARIEDSLCIAGNNINPLVSAVYQGINIAGRIKLVLPFAGQIASFYSFLV 60
QY 87 GELMPGRDQWEIIELEHVEQLINQITENARNATLALRLOGLSPFAYOOSLEDMEENRD 146
DB 61 GELMPGRDQWEIIELEHVEQLINQITENARNATLALRLOGLSPFAYOOSLEDMEENRD 120
QY 147 DARTSVLYTOYIALDELPLNMPLEPAIRNOEYVLLMVAQAANLHLILLRDSLFGESEF 206
DB 121 DARTSVLYTOYIALDELPLNMPLEPAIRNOEYVLLMVAQAANLHLILLRDSLFGESEF 180
QY 207 GLTSQEIQRYYEROVEQTDYSDYCYEWNNTGANSRGNTASWVRYNQRRLTGLVD 266
DB 181 GLTSQEIQRYYEROVEQTDYSDYCYEWNNTGANSRGNTASWVRYNQRRLTGLVD 240
QY 267 LVNLFPSYDTRYPINTSAQLTREVYTDALGATGVMAASNNVNNNAPSFAIETAVIRS 326
DB 241 LVNLFPSYDTRYPINTSAQLTREVYTDALGATGVMAASNNVNNNAPSFAIETAVIRS 300
QY 327 PHLLDFLEQLITFSTSSRSATRHMTYWRGHTIQSRPIGGGLNTSTHGSTNTSINPVRLS 386
DB 301 PHLLDFLEQLITFSTSSRSATRHMTYWRGHTIQSRPIGGGLNTSTHGSTNTSINPVRLS 360
QY 387 FFRSDYVYTESYAGVILNGIYLEPIGVPTVRNPNRPNQTFERRGTANYSQPIESPELOL 446
DB 361 FFRSDYVYTESYAGVILNGIYLEPIGVPTVRNPNRPNQTFERRGTANYSQPIESPELOL 420
QY 447 KQSETELPPTTRPYVESYSHLSHIGLSQSRVAVPVYSWTHRSADRNTISDSBITQ 506
DB 421 KQSETELPPTTRPYVESYSHLSHIGLSQSRVAVPVYSWTHRSADRNTISDSBITQ 480
QY 507 IPLVKSFNINSSTSVSGGFTGDIIRTNVNGSVLSMGLNPNNTSLQRYRVAVRYAASQ 566
DB 481 IPLVKSFNINSSTSVSGGFTGDIIRTNVNGSVLSMGLNPNNTSLQRYRVAVRYAASQ 540
QY 567 TMLKATVGGSTTFDQGFPSNTSANSLSQSFRAFPVIGISASGQ-TAGISISNAG 625
DB 541 DFDFFVSRGGTYVNNRFLATNNSGDELKYNFVRBAFTTPTFTQIDTIRTSIQGLSG 600
QY 626 RQTFHFDKIEFIPITATFEAYDLERAQEAVALFTNTNPRKTDVTDHIOVSLVA 685
DB 600 RQTFHFDKIEFIPITATFEAYDLERAQEAVALFTNTNPRKTDVTDHIOVSLVA 580

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601 NGEVYIDKIELIPIVTAPEAYDLERAQEAVALFTNTNPRRLKTDVTDHIDVSNLVA 660  
QY 686 CLSDFCLDEKRELLEKVKYAKRLSDERNLLQDPNFTSINKOPFISTNEQSNFTSIHQ 745  
Db 661 CLSDFCLDEKRELLEKVKYAKRLSDERNLLQDPNFTSINKOPFISTNEQSNFTSIHQ 720  
QY 746 SEHGMMSENITTOEGNDVPEKENVTLPGTNECYPTTLVOKIGESSEKATRYQLAGYI 805  
Db 721 SEHGMMSENITTOEGNDVPEKENVTLPGTNECYPTTLVOKIGESSEKATRYQLAGYI 780  
QY 806 EDSODLEIYLRVNAKHETLDVPGTESVWPLSVESPIGRGCEPRKCAPIHEFMDLDCSC 865  
Db 781 EDSODLEIYLRVNAKHETLDVPGTESVWPLSVESPIGRGCEPRKCAPIHEFMDLDCSC 840  
QY 866 RDEKCAHSHHPSLDIDIGCTDLHENLGVWVVFKITQESGABLGNLFEIEKPLGGA 925  
Db 841 RDEKCAHSHHPSLDIDIGCTDLHENLGVWVVFKITQESGABLGNLFEIEKPLGGA 900  
QY 926 LSRVKAKEKWRDREGLQLETKRVTEAKAVDALPYDSQYRLQADYNGIMHAADKL 985  
Db 901 LSRVKAKEKWRDREGLQLETKRVTEAKAVDALPYDSQYRLQADYNGIMHAADKL 960  
QY 986 VHRIRAYLSLAVIPGVNAIFPEELSGRIITAIISLYDARVVGKDPNNGLACMYKGH 1045  
Db 961 VHRIRAYLSLAVIPGVNAIFPEELSGRIITAIISLYDARVVGKDPNNGLACMYKGH 1020  
QY 1046 VDVQOQSHRSVLVPEWEAEVSAVRVCPGRGYLLRTAVYKEGEGCVTIHEIENNTDE 1105  
Db 1021 VDVQOQSHRSVLVPEWEAEVSAVRVCPGRGYLLRTAVYKEGEGCVTIHEIENNTDE 1080  
QY 1106 LKRNKCEEEVYPDTGTCDYTHAGCTA---VCSRNAGYEDAYEVDYTAANYKPT 1161  
Db 1081 LKRNKCEEEVYPDTGTCDYTHAGCTACADACNBNAGYEDAYEVDYTAANYKPT 1140  
QY 1162 EEEYTDVRBNDCGEYGVVNPPELPGVWTKLEYPPETDKWIEIGTEGKIYDSV 1221  
Db 1141 EEEYTDVRBNDCGEYGVVNPPELPGVWTKLEYPPETDKWIEIGTEGKIYDSV 1200  
QY 1222 ELLLMER 1228  
Db 1201 ELLLMER 1207

RESULT 9  
US-08-459-444-7  
Sequence 7, Application US/08459444A  
Patent No. 6121014  
GENERAL INFORMATION:  
APPLICANT: Kozziel, Michael G.  
Deeal, Nalini M.  
Lewis, Kelly S.  
Kramer, Vance C.  
Warren, Gregory W.  
Evola, Stephen V.  
Crosland, Lyle D.  
Wright, Martha S.  
Merlin, Ellis J.  
Lauris, Karen L.  
TITLE OF INVENTION: METHOD FOR PRODUCING A PLANT-OPTIMIZED  
NUCLEIC ACID CODING SEQUENCE  
NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSER: No. 6121014artis Agribusiness Biotechnology Research, Inc.  
STREET: 3054 Cornwallis Road  
City: Research Triangle Park  
STATE: NC  
COUNTRY: USA  
ZIP: 27709  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459, 444A  
FILING DATE: 02-Jun-1995  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/951,715  
FILING DATE: 25-SEP-1992  
APPLICATION NUMBER: US 07/772,027  
FILING DATE: 04-OCT-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Meigs, J. Timothy  
REGISTRATION NUMBER: 38,241  
REFERENCE/DOCKET NUMBER: S-18805/P1/CGC1577/CIP/DIV6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (919)541-8587  
TELEFAX: (919)541-8689  
INFORMATION FOR SEQ ID NO: 7:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1207 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 7:  
US-08-459-444-7  
Query Match 87.4%; Score 5659.5; DB 3; Length 1207;  
Best Local Similarity 89.4%; Pred. No. 0;  
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;  
QY 27 MDLSPDARIDSDISCIAGANNINPLVSASTVQTGINIGRLIGVGPAGQIASFYSEFLV 86  
Db 1 MDLSPDARIDSDISCIAGANNINPLVSASTVQTGINIGRLIGVGPAGQIASFYSEFLV 60  
QY 87 GELMPGRDOMEFLHEVEOLINOITENANRNLARLOGISFRAYQOGLBEMLENRD 146  
Db 61 GELMPGRDOMEFLHEVEOLINOITENANRNLARLOGISFRAYQOGLBEMLENRD 120  
QY 147 DARTSVLYTOYIALBELDFLAMPFLAIRNOEVELLVVYQAANLHLRLDASLFGSEF 206  
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QY 327 PHLLDFLEQLTIFSTSGRMGATRMVYRGHTIOSRPICGLNTSTGNTSINPVRLS 386  
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QY 387 FFSRDVYMTESVAGVILMGIYLEPIHGVPTVRNFRNPONTFERGTANYSQPYEPLQL 446  
Db 361 FFSRDVYMTESVAGVILMGIYLEPIHGVPTVRNFRNPONTFERGTANYSQPYEPLQL 420  
QY 447 KDSSETLPEPTTRPNYESHRLSHGLSOSRVHPVYVSWHRSADRPNTISSDITQ 506  
Db 421 KDSSETLPEPTTRPNYESHRLSHGLSOSRVHPVYVSWHRSADRPNTISSDITQ 480  
QY 507 IPIVKSFNLSGTVSVSGPFTGDIIRTVNAGSVLSMGLNFNTSLSQRRVRYVYASQ 566  
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QY 567 TMLRVTVGSGTTFDQGPSTMSANESLTSQSFRAFPVYISAGSQ-TAGISISNAG 625  
Db 541 DFDFFVSRGGTVNNFRLRTNNSGDELKYGNFVRAFTTPTFTQIDITRISQGLSG 600  
QY 626 RQFHNDKIEFIFTTFAEYDLERAQEAVALFTNTNPRRLKTDVTDHIDVSNLVA 685  
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QY 686 CLSDEFCLEKRELLKVKYAKRLSDERNLLODPNFTSINKOPDFTSTNEQSNFTSIHQ 745
DB 661 CLSDEFCLEKRELLKVKYAKRLSDERNLLODPNFTSINKOPDFTSTNEQSNFTSIHQ 720
QY 746 SEHGMMGSENIITIOEGNDVFKENYVTLPGTFNECYPTLYOKIGESLKYATYTOURGY 805
DB 721 SEHGMMGSENIITIOEGNDVFKENYVTLPGTFNECYPTLYOKIGESLKYATYTOURGY 780
QY 806 EDSQDEIYLIRYNAKHETLDVPGTSWVPLSVESPIGRGCBPNRCAPHFEMNPDLDCSC 865
DB 781 EDSQDEIYLIRYNAKHETLDVPGTSWVPLSVESPIGRGCBPNRCAPHFEMNPDLDCSC 840
QY 866 RDEKCAHSHHSLDIDICTDLHENTLGWVVPFKITQOGHARLGNLEFIEBKPLGGA 925
DB 841 RDEKCAHSHHSLDIDICTDLHENTLGWVVPFKITQOGHARLGNLEFIEBKPLGGA 900
QY 926 LSRVKAABKMKRREKQLETKRVYVTEAKEAVDALFVDSQYRLOADNTNIGMTHADKL 985
DB 901 LSRVKAABKMKRREKQLETKRVYVTEAKEAVDALFVDSQYRLOADNTNIGMTHADKL 960
QY 986 VHRIRAYISELSVIRGVNAEIFEELGRIITTAISLYDARNVYKNGDFNNGLACMNVKGR 1045
DB 961 VHRIRAYISELSVIRGVNAEIFEELGRIITTAISLYDARNVYKNGDFNNGLACMNVKGR 1020
QY 1046 VDVQOSHHSVLYIPKWEAVSQAVRVCPRGYTLKRYTAKGEGGSCCTIHEIENNTDE 1105
DB 1021 VDVQOSHHSVLYIPKWEAVSQAVRVCPRGYTLKRYTAKGEGGSCCTIHEIENNTDE 1080
QY 1106 LKFKNCEEEVYPTDGTCTDYTAHQGTA----VCNSRNAGYDAVEVDPTASVNYKPT 1161
DB 1081 LKFKNCEEEVYPTDGTCTDYTAHQGTA----VCNSRNAGYDAVEVDPTASVNYKPT 1140
QY 1162 EEEETVDVRADNCEYDRGVNYPPLPAGYTKLEVEFPEPTDKWJIEIGTEBKFIVDSV 1221
DB 1141 EEEETVDVRADNCEYDRGVNYPPLPAGYTKLEVEFPEPTDKWJIEIGTEBKFIVDSV 1200
QY 1222 ELLMEB 1228
DB 1201 ELLMEB 1207

RESULT 10
US-09-053-549-8
; Sequence 8, Application US/09053549
; Patent No. 6121521
; GENERAL INFORMATION:
; APPLICANT: Dasaal, Nalin
; TITLE OF INVENTION: No. 6121521el Insecticidal Protein and Gene
; NUMBER OF SEQUENCES: 8
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 6121521artia Corporation
; STREET: 3054 Cornwallis Rd.
; CITY: Research Triangle Park
; STATE: NC
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/053,549
; FILING DATE: 01-APR-1998
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Pace, Gary M.
; REGISTRATION NUMBER: 40,403
; REFERENCE/DOCKET NUMBER: CGC 1995
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-541-8582
; TELEFAX: 919-541-8689
; INFORMATION FOR SEQ ID NO: 8:

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; SEQUENCE CHARACTERISTICS:
; LENGTH: 1207 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-053-549-8

Query Match      87.4%; Score 5659.5; DB 3; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

QY 27 MDLSPARIEDSLCIAGNNINPLVASTYQGINIAGILGLVGPAGQIASPFSFLV 86
DB 1 MDLSPARIEDSLCIAGNNIDPVSASTVQGINIAGILGLVGPAGQIASPFSFLV 60
QY 87 GELMPGRDQWEIIELEHVEQLINQITENARNTALARLOGIDSPFAQOSLEDMENRD 146
DB 61 GELMPGRDQWEIIELEHVEQLINQITENARNTALARLOGIDSPFAQOSLEDMENRD 120
QY 147 DARTSVLYTQYIALELDFLNMPLFAINQOEVLMTYAQAANHLHLIRDSLFGSER 206
DB 121 DARTSVLYTQYIALELDFLNMPLFAINQOEVLMTYAQAANHLHLIRDSLFGSER 180
QY 207 GLTSQRIORVYERQVOTRDSYDCEWYNTGINSRGTAASWVRVNOFRRLTGVLD 266
DB 181 GLTSQRIORVYERQVOTRDSYDCEWYNTGINSRGTAASWVRVNOFRRLTGVLD 240
QY 267 LVALLPSPDYTRTPYPINTSAQLTREYVTDAGATGVMAASNNYNNNAPSAIETAVIR 326
DB 241 LVALLPSPDYTRTPYPINTSAQLTREYVTDAGATGVMAASNNYNNNAPSAIETAVIR 300
QY 327 PHLDLPEQLITPSSSRMSATRHMTYRGHTIQSPRIGGLNTSHGSTNTSINPVRLS 386
DB 301 PHLDLPEQLITPSSSRMSATRHMTYRGHTIQSPRIGGLNTSHGSTNTSINPVRLS 360
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DB 421 KQSETELPEETTERPNYESYSHLSHIGLISQSRVHPVYSWTHRSADRNTISSDSITQ 480
QY 507 IPIVKSFNINSGTSVSGPFTGGDIIRTNVNGSVLSMGLNFNNISLQRYRVRYAASQ 566
DB 481 IPIVKSFNINSGTSVSGPFTGGDIIRTNVNGSVLSMGLNFNNISLQRYRVRYAASQ 540
QY 567 TMYLRYTVGSGTTPDGGPSTMSANESLTSQSRFAEPVVGISASGQ--TAGSISNAG 625
DB 541 DEDFVSRRGTYVNNRFLKRTNMSGDELKXGNVRAFTTPTQTQIDITRTSIQGLSG 600
QY 626 RQTFHFDKIEFIPITATFAEYDLERAQAVNALFTNTNPRRLKTDVTDHIDQVSNLVA 685
DB 601 NGEVYIDKIEIIPVATFPAEYDLERAQAVNALFTNTNPRRLKTDVTDHIDQVSNLVA 660
QY 686 CLSDEFCLEKRELLKVKYAKRLSDERNLLODPNFTSINKOPDFTSTNEQSNFTSIHQ 745
DB 661 CLSDEFCLEKRELLKVKYAKRLSDERNLLODPNFTSINKOPDFTSTNEQSNFTSIHQ 720
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DB 721 SEHGMMGSENIITIOEGNDVFKENYVTLPGTFNECYPTLYOKIGESLKYATYTOURGY 780
QY 806 EDSQDEIYLIRYNAKHETLDVPGTSWVPLSVESPIGRGCBPNRCAPHFEMNPDLDCSC 865
DB 781 EDSQDEIYLIRYNAKHETLDVPGTSWVPLSVESPIGRGCBPNRCAPHFEMNPDLDCSC 840
QY 866 RDEKCAHSHHSLDIDICTDLHENTLGWVVPFKITQOGHARLGNLEFIEBKPLGGA 925
DB 841 RDEKCAHSHHSLDIDICTDLHENTLGWVVPFKITQOGHARLGNLEFIEBKPLGGA 900
QY 926 LSRVKAABKMKRREKQLETKRVYVTEAKEAVDALFVDSQYRLOADNTNIGMTHADKL 985

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Db 901 LSRVKAERKKRDKREKQLETRKYVTEAKAVDALFVDSQYDRLQADTNIGMHAADKL 960
Qy 986 VHRIRREAYSELSPVPGVNAEIEFEELGRIITAIISLYDARVVYKXGDFNNGLACMVKYGH 1045
Db 961 VHRIRREAYSELSPVPGVNAEIEFEELGRIITAIISLYDARVVYKXGDFNNGLACMVKYGH 1020
Qy 1046 VDVQOQHSHRSVLYTPREAEVSQAVYCRGRGYLTRTATAYKEGGECCCTTIEENNTDE 1105
Db 1021 VDVQOQHSHRSVLYTPREAEVSQAVYCRGRGYLTRTATAYKEGGECCCTTIEENNTDE 1080
Qy 1106 LKRNCEEESEVYPTDGTGNDYTAHOGTA----VCNRRNAGYEDAYEVDTTASVNYKPTY 1161
Db 1081 LKRNCEEESEVYPTDGTGNDYTAHOGTAHOGTACADACNSRANGYEDAYEVDTTASVNYKPTY 1140
Qy 1162 EEEETVDVRDNHCEYGRGVYVPPPLPAGYWKELXYFPETDKWIEBIGETGKFIVDSV 1221
Db 1141 EEEETVDVRDNHCEYGRGVYVPPPLPAGYWKELXYFPETDKWIEBIGETGKFIVDSV 1200
Qy 1222 ELLLMEE 1228
Db 1201 ELLLMEE 1207

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RESULT 11
US-09-547-422-7
Sequence 7, Application US/09547422
Patent No. 6320100
GENERAL INFORMATION:
APPLICANT: Kozel, Michael G.
Deest, Najim M.
Lewis, Kelly S.
Kramer, Vance C.
Warren, Gregory W.
Evola, Stephen V.
Crossland, Lyle D.
Wright, Martha S.
Melin, Ellis J.
Launig, Karen L.
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
INSECTICIDAL ACTIVITY IN MAIZE
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 6320100arctis Agribusiness Biotechnology Research, Inc.
STREET: 3054 Cornwalis Road
CITY: Research Triangle Park
STATE: NC
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/547,422
FILING DATE: 11-Apr-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/459,595
FILING DATE: 02-JUN-1995
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Me198, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: S-18805H
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8587
TELEFAX: (919)541-8689
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:

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;
; LENGTH: 1207 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 7:
US-09-547-422-7

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Query Match 87.4%; Score 5659.5; DB 3; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

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Qy 27 MDLSPPDARIDSDUCIAGNNINPLVSASTVQTGTINGRILGUTGVPPAGIASFYSFLV 86
Db 1 MDLPPDARIDSDUCIAGNNIDPVSASTVQTGTINGRILGUTGVPPAGIASFYSFLV 60
Qy 87 GELMPGRDOMEIPLHEVEQLINQITENARNATLALOGISDFRAYOOSLEDMLENRD 146
Db 61 GELMPGRDOMEIPLHEVEQLINQITENARNATLALOGISDFRAYOOSLEDMLENRD 120
Qy 147 DARTSVLYTOYIALBELDFLAMPFAIRNOEVLNVYAQAANIHLRLDASLFGSEF 206
Db 121 DARTSVLYTOYIALBELDFLAMPFAIRNOEVLNVYAQAANIHLRLDASLFGSEF 180
Qy 207 GLTSQEIQRTERQVBOETRDYSDYCEWYNTGNSLFGTAASVRYNORRDLTLGVLD 266
Db 181 GLTSQEIQRTERQVBOETRDYSDYCEWYNTGNSLFGTAASVRYNORRDLTLGVLD 240
Qy 267 LVALLPSPYDTRTPINTSAQLTREVVYDAGAGVUNNASNNWYNNNAPSSAIEFTAVIRS 326
Db 241 LVALLPSPYDTRTPINTSAQLTREVVYDAGAGVUNNASNNWYNNNAPSSAIEFTAVIRS 300
Qy 327 PHLLDFLEQLTIFSTSSRSATRMWYRGHTIOSRPIGGALNTSTGNTSINPYRLS 386
Db 301 PHLLDFLEQLTIFSTSSRSATRMWYRGHTIOSRPIGGALNTSTGNTSINPYRLS 360
Qy 387 PFRSDVYTWESYAGVLMGILYLEPIHGVPTVRNFRNPONTFERGTANYQPYSPGLOL 446
Db 361 PFRSDVYTWESYAGVLMGILYLEPIHGVPTVRNFRNPONTFERGTANYQPYSPGLOL 420
Qy 447 KQSETELPETTERPNVESYSHRLSHGLSOSRAVNVYVSWTHRSADRNTTSSDSITQ 506
Db 421 KQSETELPETTERPNVESYSHRLSHGLSOSRAVNVYVSWTHRSADRNTTSSDSITQ 480
Qy 507 IPLVKSFNLSGTSVSGPFGTDIIIRTVNNSVSLMGILFNNTSLQRVRVRVYASQ 566
Db 481 IPLVKSFNLSGTSVSGPFGTDIIIRTVNNSVSLMGILFNNTSLQRVRVRVYASQ 540
Qy 567 TMLRYTVGSGTTFDQGFPSSTMSANSLTSQSFRFAEPVGISASGQ-TAGISISNAG 625
Db 541 DDFPVSRRGQTVNNFRFLATMNSGDELKYGNFVRRAFTTPFTQTQDIIIRTSIQGLSG 600
Qy 626 RQTFHDKIEPIITATFEAEYDLERAQEAVALFTNTNRRLKTDVTDVHIQVSLVA 685
Db 601 NGEVYIDKIEIIPVYATFEAEYDLERAQEAVALFTNTNRRLKTDVTDVHIQVSLVA 660
Qy 686 CLSDFECLDEKRELKRYAKRLSDERNLQDPNFTSINKQDFISTNQSNTS-IHQ 745
Db 661 CLSDFECLDEKRELKRYAKRLSDERNLQDPNFTSINKQDFISTNQSNTS-IHQ 720
Qy 746 SEHGMMGSENIITIQEGNDVFKENYVTLPGTFNECYPTLYYOKI GSESLKAYTRYQLAGYI 805
Db 721 SEHGMMGSENIITIQEGNDVFKENYVTLPGTFNECYPTLYYOKI GSESLKAYTRYQLAGYI 780
Qy 806 EDSQDLIELYIRNNAHETLDVGTESWPLSTESPGRGGEYRCAHPHEMNPDLDCSC 865
Db 781 EDSQDLIELYIRNNAHETLDVGTESWPLSTESPGRGGEYRCAHPHEMNPDLDCSC 840
Qy 866 RDEKCAHSHHSLDIDIGCTDLHENTLGWVVFVKITQEGHARLGNLEFIEEKPLLGEA 925
Db 841 RDEKCAHSHHSLDIDIGCTDLHENTLGWVVFVKITQEGHARLGNLEFIEEKPLLGEA 900
Qy 926 LSRVKAERKKRDKREKQLETRKYVTEAKAVDALFVDSQYDRLQADTNIGMHAADKL 985

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Db      901 LSRVKAERKMDREKLEQLETKRYTAEKAVDALFVDSQYDLQADTNIGIHADKL 960
Qy      986 VHRIRAYISELSVIGVNAIEFEELGRITITASLYDARNVYKNGDPNGLACMNVKQH 1045
Db      961 VHRIRAYISELPVIGVNAIEFEELGHITITSLYDARNVYKNGDPNGLACMNVKQH 1020
Qy      1046 VDVQSHHSVLVIFPEWEAVSQAVRVCPRGYILNVTAYKEGYGSCCTIHEIENNTDB 1105
Db      1021 VDVQSHHSVLVIFPEWEAVSQAVRVCPCGYILNVTAYKEGYGSCCTIHEIENNTDB 1080
Qy      1106 LRFKNKEEVRVYTDGTGCTNDYTAHOGTA----VCNSRNAGYBDAYEVDPTASVNTKPTV 1161
Db      1081 LRFKNKEEVRVYTDGTGCTNDYTAHOGTACADA CNSRNAGYBDAYEVDPTASVNTKPTV 1140
Qy      1162 EEEYTDVDRDNHCEYDRGVNYPPLPAGYMTKELEYFPEPTDKVWIEIGETGEKFLVDSV 1221
Db      1141 EEEYTDVDRDNHCEYDRGVNYPPLPAGYMTKELEYFPEPTDKVWIEIGETGEKFLVDSV 1200
Qy      1222 ELLMEE 1228
Db      1201 ELLMEE 1207

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RESULT 12
US-09-988-462-7
Sequence 7, Application US/09988462
Patent No. 6720488
GENERAL INFORMATION:
APPLICANT: Kozziel, Michael G.
Deest, Nalini M.
Lewis, Kelly S.
Kramer, Vance C.
Warren, Gregory W.
Evola, Stephen V.
Crossland, Lytle D.
Wright, Martha S.
Merlin, Ellis J.
Launis, Karen L.
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
INSECTICIDAL ACTIVITY IN MAIZE
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSEE: Syngenta Biotechnology, Inc.
STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: NC
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/988,462
FILING DATE: 20-NO. 6720488-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 09/547,422
FILING DATE: 11-APR-2000
APPLICATION NUMBER: US 08/459,504
FILING DATE: 02-JUN-1995
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Melgs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: S-188051
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8587
TELEFAX: (919)541-8689

```

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; INFORMATION FOR SEQ ID NO: 7:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1207 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 7:
US-09-988-462-7

Query Match      87.4%; Score 5659.5; DB 4; Length 1207;
Best local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

Qy      27 MDLSPDARIEDSLCTAEGNNINPLVASASTVQGINAGILGVLPFGQLASFSLV 86
Db      1 MDLDPARIEDSLCTAEGNNIDPVSASTVQGINAGILGLVFPFGQLASFSLV 60
Qy      87 GELMPRGDQWEIPLFHVHQLINQQTENARNTALRLGLGDSFPAIQQSLRDMLENRD 146
Db      61 GELMPRGDQWEIPLFHVHQLINQQTENARNTALRLGLGDSFPAIQQSLRDMLENRD 120
Qy      147 DARTSVLYTOYIALELDFLNMPLEFAINQEVPLIMVYAQANHLILLRDSLFGSER 206
Db      121 DARTSVLYTOYIALELDFLNMPLEFAINQEVPLIMVYAQANHLILLRDSLFGSER 180
Qy      207 GLTSGEIQRYRBOVEQTRDYSDYCYEWNTGLNSLRGTNAAWRYNQFRRLTIGVLD 266
Db      181 GLTSGEIQRYRBOVEQTRDYSDYCYEWNTGLNSLRGTNAAWRYNQFRRLTIGVLD 240
Qy      267 LVALPSPYDTRYPINTSAQLTRVYTDALIGATGVMAAMNNVNNNAAPSALETAVIRS 326
Db      241 LVALPSPYDTRYPINTSAQLTRVYTDALIGATGVMAAMNNVNNNAAPSALETAVIRS 300
Qy      327 PHLLDFLEQLITFSTSSRSATRHMTYRGHTIQSRPIGGGLNTSTHGSTNTSINPRLS 386
Db      301 PHLLDFLEQLITFSSRSRSNTRHMTYRGHTIQSRPIGGGLNTSTHGSTNTSINPRLS 360
Qy      387 PFSRDVYMTESYAGVILKGIYLEPIHGVTTRFNPFPNPTTERGTANTSQPIESFGLQ 446
Db      361 PFSRDVYMTESYAGVILKGIYLEPIHGVTTRFNPFPNPTTERGTANTSQPIESFGLQ 420
Qy      447 KQSETELPETTERPYVESYSHLSHIGLISGRVAVPYSWTHRSADRNTTSSDSITQ 506
Db      421 KQSETELPETTERPYVESYSHLSHIGLISGRVAVPYSWTHRSADRNTTSSDSITQ 480
Qy      507 IPLVKSFNLSGTSVSGPFTGGDIIRTVNGSVLSMGLNFNNNTSLQRYRVRVYAAQ 566
Db      481 IPLVKSSELPGQTVYVRGFTGGDILRRTNNGCPPIRYTVANGPLQRYRIRYASTV 540
Qy      567 TMLRVTVGGSTTEFGQPSPTMSANESLTSOSFRPAEPFVGISASGSQ-TAGISISNAG 625
Db      541 DDFDFVSRGQTVNNRFLRTMNSGDELKXGNVVRBAFTTPTFTQIODIIRTSIQGLSG 600
Qy      626 RQTFHFDKLEFPIPTTPEAEYDLERAQAVNALFTNTNPRRLKTVDTVDHIQVSNLVA 685
Db      601 NGEVYIDKLEIIPVATFPEAEYDLERAQAVNALFTNTNPRRLKTVDTVDHIQVSNLVA 660
Qy      686 CLSDEFCLDEKRELKVKYAKALSDEBNLLODPNFTSINKQDPFISTNEQSNTSIHQ 745
Db      661 CLSDEFCLDEKRELKVKYAKALSDEBNLLODPNFTSINKQDPFISTNEQSNTSIHQ 720
Qy      746 SEHGWSGSENIITQEGNDVFKENYVTLPGTFNECYFTYLYQKIGSEELKAYTRYQLRGY 805
Db      721 SEHGWSGSENIITQEGNDVFKENYVTLPGTFNECYFTYLYQKIGSEELKAYTRYQLRGY 780
Qy      806 EDSQDLEIYLIRNAGHEITLDVGTESVWPLVSFPIGRGGEENRCAHPHEMPDLDSC 865
Db      781 EDSQDLEIYLIRNAGHEITLDVGTESVWPLVSFPIGRGGEENRCAHPHEMPDLDSC 840
Qy      866 RDEKCAHSHHSFLDIDIGCTDLHENTLGVVVFKITQEGHARLGNLEFIEEKPLLGEA 925
Db      841 RDEKCAHSHHSFLDIDIGCTDLHENTLGVVVFKITQEGHARLGNLEFIEEKPLLGEA 900

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Qy 926 LSRVKAERKKRDRREKLOLETKRYTBAKAVDALFVDSOYNLQADPTNIGMTHAADKL 985  
 Db 901 LSRVKAERKKRDRREKLOLETKRYTBAKAVDALFVDSQYDRLQADPTNIGMTHAADKL 960  
 Qy 986 VHRIRREAYLSLSVYPCGVNAEIPFEELEGRIITTAISLYDARVYVKNQGFNNGLACMYKXG 1045  
 Db 961 VHRIRREAYLSLSVYPCGVNAEIPFEELEGRIITTAISLYDARVYVKNQGFNNGLACMYKXG 1020  
 Qy 1046 VDVQOOSHRSVLVYPEREAEVSAVRVCPGRGYTLRTATYKXGEGCVTIHEIENNTDE 1105  
 Db 1021 VDVQOOSHRSVLVYPEREAEVSAVRVCPGRGYTLRTATYKXGEGCVTIHEIENNTDE 1080  
 Qy 1106 LKRNCEEEVYPPDTCNDYTAHOGTA---VCNSRNAGYERAVYVDTTASVNYKFTY 1161  
 Db 1081 LKRNCEEEVYPPDTCNDYTAHOGTAHOGTACADACNSRNAGYERAVYVDTTASVNYKFTY 1140  
 Qy 1162 EBEETVYDVRDNHCEYRGVYVNPPLPAGYATKELFYEPETDKWIEIGETGKFIYDSV 1221  
 Db 1141 EBEETVYDVRDNHCEYRGVYVNPPLPAGYATKELFYEPETDKWIEIGETGKFIYDSV 1200  
 Qy 1222 ELLIMEE 1228  
 Db 1201 ELLIMEE 1207

## RESULT 13

US-09-053-549-2

Sequence 2, Application US/09053549

Patent No. 6121521

GENERAL INFORMATION:

APPLICANT: Deseat, Nalint

TITLE OF INVENTION: No. 6121521el Insecticidal Protein and Gene

NUMBER OF SEQUENCES: 8

CORRESPONDENCE ADDRESS:

ADDRESSEE: No. 6121521arlie Corporation

STREET: 3054 Cornwallis Rd.

CITY: Research Triangle Park

STATE: NC

COUNTRY: USA

ZIP: 27709

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/053,549

FILING DATE: 01-Apr-1998

CLASSIFICATION: 800

ATTORNEY/AGENT INFORMATION:

NAME: Pace, Gary M.

REGISTRATION NUMBER: 40,403

REFERENCE/DOCKET NUMBER: CGC 1995

TELECOMMUNICATION INFORMATION:

TELEPHONE: 919-541-8582

TELEFAX: 919-541-8689

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 1227 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-09-053-549-2

Query Match

Best Local Similarity 84.3%; Score 5436.5; DB 3; Length 1227;

Matches 1040; Conservative 63; Mismatches 118; Indels 13; Gaps 5;

Qy 1 LTRNRKNEEIIINALSI PAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVSASTVQTGI 60  
 Db 1 MTSNRKNEEIIINL-----AVSNHSAQMDLDPDARIEDSLCIAEGNNIDPFVSASTVQTGI 55  
 Qy 61 NTAAGILGVLPFAGQIASFYSLVGEIWPGRDQWEITLHEVEQLINQOITENANRTA 120

Db 56 NIAGRILGVLPFAGQIASFYSLVGEIWPGRDQWEITLHEVEQLINQOITENANRTA 115  
 Qy 121 LARLOGLSDSPRAVOQSLBDFWLENRDDARTSVYVYQVIALELFLNAMPFAIRNORVP 180  
 Db 116 LARLOGLSDSPRAVOQSLBDFWLENRDDARTSVYVYQVIALELFLNAMPFAIRNORVP 175  
 Qy 181 LAMVYAQANILHLLLDASLFGSEFGLTSGEIRYERQVYEQTRDYSYCVEMVNTGLN 240  
 Db 176 LAMVYAQANILHLLLDASLFGSEFGLTSGEIRYERQVYEQTRDYSYCVEMVNTGLN 235  
 Qy 241 SLRGTAASVWRVXNQFRRDLTLGLDIALPSPDTRTYPTNTSAQLTREYTTAIGATG 300  
 Db 236 SLRGTAASVWRVXNQFRRDLTLGLDIALPSPDTRTYPTNTSAQLTREYTTAIGATG 295  
 Qy 301 VNMAAMNMYNNNAPSFAIEATAVIRSPHLDFLEQLTFPSRMSATRHMTYRGTHTQ 360  
 Db 296 VNMAAMNMYNNNAPSFAIEATAVIRSPHLDFLEQLTFPSRMSATRHMTYRGTHTQ 355  
 Qy 361 SRPIGGGLNTSTHGSTNTSINPVRLSPFSRDVYVTESYAGVLMGIYLEPIHGVPTVRFN 420  
 Db 356 SRPIGGGLNTSTHGAATVTTINPVTLRFASRDVYVTESYAGVLMGIYLEPIHGVPTVRFN 415  
 Qy 421 FRNPQTFERGITANYSQPYSPGLQLOSTELPPTTERPNYSYSHRSLHIGLISOR 480  
 Db 416 FRNPQNTSDRGITANYSQPYSPGLQLOSTELPPTTERPNYSYSHRSLHIGLISOR 475  
 Qy 481 VHPVYVSWTRSDRTNTISDSITQPLVKSFNLSNGSTSVSGRGYTGDIIRTNVNGS 540  
 Db 476 VHPVYVSWTRSDRTNTIGPNRTITQIPVYKASLPGGTVVKGFGTGDIIRTNVNGS 535  
 Qy 541 VLSWGLNFNTSLOREYVRVRYAASQTMVLRVYVGTSTPDQGFSTMSANESLTSOSFR 600  
 Db 536 FGPIRYTVNGBPLQGRVYIGFRYASTVDPDFVSGGTVANNFRRLRTMNSGDELKYNFV 595  
 Qy 601 PABPVGISASGSGT-AGISISNNAGQTFHFDKIEPTPTTAIRYAEYDLERAQEAVAL 659  
 Db 596 RRAFTPTPTFOIONTIRTSIOGLSGNGEYVYIDKIRIIPVATFEAYEDLERAQEAVAL 655  
 Qy 660 FTNTPRRLKTDVTDYHIDQVSNLVACTSDFCDEKRELEKKYKAKRLSDENLLODP 719  
 Db 656 FTNTPRRLKTDVTDYHIDQVSNLVACTSDFCDEKRELEKKYKAKRLSDENLLODP 715  
 Qy 720 NPTSINKQDPFISTNESNFTSIHEOSEHGMWGSENTITQGNDFKENTVYTLPGTENEC 779  
 Db 716 NPTSINKQDPFISTNESNFTSIHEOSEHGMWGSENTITQGNDFKENTVYTLPGTENEC 775  
 Qy 780 YPTLYLYOKIGESSELKATRYQLRGYIBDSODLEIYLIRYNAKHETLDVPGTESVPLSV 839  
 Db 776 YPTLYLYOKIGESSELKATRYQLRGYIBDSODLEIYLIRYNAKHETLDVPGTESVPLSV 835  
 Qy 840 SPYGRGCEPNRCAHPHBNPDLDSCGDEKCAHSHHFEFLDIDGTDLHENTGVVVF 899  
 Db 836 SPYGRGCEPNRCAHPHBNPDLDSCGDEKCAHSHHFEFLDIDGTDLHENTGVVVF 895  
 Qy 900 KITQEGHARLGNLEFIEERKPLGELASRYKRAEKKRDRREKLOLETKRYTBAKAVD 959  
 Db 896 KITQEGHARLGNLEFIEERKPLGELASRYKRAEKKRDRREKLOLETKRYTBAKAVD 955  
 Qy 960 ALFVDSQYNRLQADPTNIGMTHAADKLVHRIRREAYLSLSVYPCGVNAEIPFEELEGRIITTAI 1019  
 Db 956 ALFVDSQYNRLQADPTNIGMTHAADKLVHRIRREAYLSLSVYPCGVNAEIPFEELEGRIITTAI 1015  
 Qy 1020 SLVDARVYVKNQGFNNGLACMYKXGAVDV-QQSHRSVYVYPEREAEVSAVRVCPGRGY 1078  
 Db 1016 SLVDARVYVKNQGFNNGLACMYKXGAVDV-QQSHRSVYVYPEREAEVSAVRVCPGRGY 1075  
 Qy 1079 ILRTAVYKXGEGCVTIHEIENNTDELKPKNCEEEVYPTDGTGNDYTA---HOGTA 1134  
 Db 1076 ILRTAVYKXGEGCVTIHEIENNTDELKPKNCEEEVYPTDGTGNDYTA---HOGTA 1134  
 Qy 1135 VNSRNAGYEDAYEDTTASVNYKFTYEBETVYDVRDNHCEYRGVYVNPPLPAGYATK 1194

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Db      1135 -YTSNRKRGIDGAVESNSVPADYASAVEEKATYDGRDNDPCBSNRGCGYTPLPAGYVTK 1193
Qy      1195 ELEFPETDKWMIIEGTEGKPIVDSVELLMEE 1228
Db      1194 ELEFPETDKWMIIEGTEGKPIVDSVELLMEE 1227

RESULT 14
US-08-100-709-4
; Sequence 4, Application US/08100709
; Patent No. 5322687
; GENERAL INFORMATION:
; APPLICANT: Donovan, William P.
; APPLICANT: Tan, Yuding
; APPLICANT: Jany, Christine S.
; APPLICANT: Gonzalez Jr., Jose M.
; TITLE OF INVENTION: BACILLUS THURINGIENSIS CRYET4 AND CRYET5
; TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESSES:
; ADDRESSEE: Paultech Schwarze Jacobs & Nadel c/o A.S.
; ADDRESSEE: Nadel
; STREET: 1601 Market Street, 36th Floor
; CITY: Philadelphia
; STATE: Pennsylvania
; COUNTRY: U.S.A.
; ZIP: 19103
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/100,709
; FILING DATE: 19930729
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: Egolf, Christopher
; REGISTRATION NUMBER: 27633
; REFERENCE/DOCKET NUMBER: 7205-49
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 215-757-1590
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1229 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-100-709-4

Query Match      80.8%; Score 5237.5; DB 1; Length 1229;
Best Local Similarity 79.9%; Pred. No. 0;
Matches 983; Conservative 94; Mismatches 149; Indels 5; Gaps 3;

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Qy      301 V--NNASMMVNNNAPSPSALITAVIRSPHLLDLEQLITFTSSSRMSATRHNTYRGHT 358
Db      301 AMSGFASTWFMNNAPSPSALITAVIRSPHLLDLEQLITFTSSSRMSATRHNTYRGHT 360
Qy      359 IQRPIGGLANTSTHGST-NTSINPVRLSFSDRYVWTSYSGVLMGTYLBIPIHGPTV 417
Db      361 IAFRPIGGLANTSTHGST-NTSINPVRLSFSDRYVWTSYSGVLMGTYLBIPIHGPTV 418
Qy      418 RNFNRNPONTFERGTANYSPYSPGLQKDSLETLPETTERPNYESYSHRLSHIGLIS 477
Db      419 RNFNRNPONTFERGTANYSPYSPGLQKDSLETLPETTERPNYESYSHRLSHIGLIT 478
Qy      478 QSRVAVPVTSWTHRSADRNTTSSDSITQIPLYKSNNLSGTSVSGPGTGDDIRTNV 537
Db      479 GWTLRAPVYSWTHRSADRNTTIGPNRITQIPLYKALNLSHGTVVGPGTGDDIRTNV 538
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Db      539 TGFEGDIRLNINPVSQRVVRIRVASTTDLOFTRINGTIVNIGNFSRTNKGNDLETR 598
Qy      598 SRFPAEPVGISASGSGTAGISNNAGRTQFHFDEKIEFPIVATPEAEYDLERAQAVN 657
Db      599 SRTAGFSTPFPMANQSTFTLGAQSFSGQVYIDVEFEVPAEVTPEAEYDLERAQAVN 658
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Qy      718 DPFSTINRQOPISINQSNFISIHQSEHGWSGENTIOEGNVFKEKNYTLPGTEN 777
Db      719 DPFSTINRQOPISINQSNFISIHQSEHGWSGENTIOEGNVFKEKNYTLPGTEN 778
Qy      778 ECPYLYLQKIGSESEKAYTRQYRGYIEDSDLEIYLRYNAKHETLDVPGTESVWPLS 837
Db      779 ECPYLYLQKIGSESEKAYTRQYRGYIEDSDLEIYLRYNAKHETLDVPGTSLWPLS 838
Qy      838 VESPIRCGEPRNCAPHFEMNPDLDCSCRDGECANHSIHFSLDIDIGCTDHEHNGVW 897
Db      839 VESPIRCGEPRNCAPHFEMNPDLDCSCRDGECANHSIHFSLDIDIGCTDHEHNGVW 898
Qy      898 VPKITQEBGARLGNLEFIEBKPLDGEALSRVYRAKKRDKKREKQLETKRYTAEKKA 957
Db      899 VPKITQEBGARLGNLEFIEBKPLDGEALSRVYRAKKRDKKREKQLETKRYTAEKKA 958
Qy      958 VDALLFYDSQYNRLOADNTNIGMTHPADKLVHRIEAYLSBELSVIPGVNAEIFEELBGRIT 1017
Db      959 VDALLFYDSQYNRLOADNTNIGMTHPADKLVHRIEAYLSBELSVIPGVNAEIFEELBGRIT 1018
Qy      1018 AILSYDARVYVKNKGDFNNGLACNNVKGHYDVQOSSHRSVLVTPBWEAEVSQAVRVCPRG 1077
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Qy      1078 YILRYTAYKGEYGEQCVTHIEINNTDELKFKKCEEBEYPTPTGTCNDTAAOGTAVCN 1137
Db      1079 YILRYTAYKGEYGEQCVTHIEINNTDELKFKKCEEBEYPTPTGTCNDTAAOGTAVCN 1138
Qy      1138 SRNAGYEDAYEVDTTASVYKPYEEETVYDVRDNHCEDRQYVYVPPLPAGYMTKELE 1197
Db      1139 SRNAGYEDAYEVDTTASVYKPYEEETVYDVRDNHCEDRQYVYVPPLPAGYMTKELE 1198
Qy      1198 YFPETDKWMIIEGTEGKPIVDSVELLMEE 1228
Db      1199 YFPETDKWMIIEGTEGKPIVDSVELLMEE 1229

RESULT 15
US-08-176-865-4
; Sequence 4, Application US/08176865
; Patent No. 5616319
; GENERAL INFORMATION:
; APPLICANT: Donovan, William P.
; APPLICANT: Tan, Yuding

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APPLICANT: Jany, Christine S.
APPLICANT: Gonzalez Jr., Jose M.
TITLE OF INVENTION: BACILLUS THURINGIENSIS cryET4 AND cryET5
TITLE OF INVENTION: TOXIN GENES AND PROTEINS TOXIC TO LEPIDOPTERAN INSECTS
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSER: Paulsch Schwarze Jacobs & Nadel c/o A.S.
ADDRESSER: Nadel
STREET: 1601 Market Street, 36th Floor
CITY: Philadelphia
STATE: Pennsylvania
COUNTRY: U.S.A.
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/176,865
FILING DATE: 30-DEC-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/100,709
FILING DATE: 29-JUL-1993
ATTORNEY/AGENT INFORMATION:
NAME: Egolf, Christopher
REGISTRATION NUMBER: 27633
REFERENCE/DOCKET NUMBER: 7205-49
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-757-1590
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 1229 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-176-865-4

Query Match      80.8%; Score 5237.5; DB 1; Length 1229;
Best Local Similarity 79.9%; Pred. No. 0;
Matches 963; Conservative 94; Mismatches 149; Indels 5; Gaps 3;

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DB 61 NIAGRIILGVLPFAQIASFYSLVGEMLPPSGRDPEIFLEHYEQILROOVTEENTETA 120
QY 121 LARLOGISDFRAYOOSLQEDMLNRRDARTSVLYQYIALDELPLNAMPFAIRNOEVP 180
DB 121 IARLEIGKGRYKYOALLETWLDNRDARSRIILERYVALEDDITTALEFIRNEEVP 180
QY 181 LLMVYAQAANLHLLLRDASLFGSEFGLTSQEIORYEROVEQTRDSDYCEVMYTGILN 240
DB 181 LLMVYAQAANLHLLLRDASLFGSEWGMASDVNOYYQEQIARTBEVSNHCVMYTGILN 240
QY 241 SLRGTAASVVRVNOFRDITLGLVLDVALPESYDTRTYPIINTSAQLTREVTDAIGATG 300
DB 241 NLRGTAESVLRVNOFRDITLGLVLDVALPESYDTRTYPIINTSAQLTREIYTDPIGRIN 300
QY 301 V--NMASMMVYNNASFSFAIETAVIRSPHLDPLEQLTFSTSSRMSATRHMTYRGHT 358
DB 301 ABSGFSSTWNNASFSFAIETAVIRSPHLDPLEQLTFSTSSRMSATRHMTYRGHT 358
QY 359 IGSRIPIGGIINTSTHST--NTSINPVRLSFSRDVYWTESYAGVLWGLIABEIHGVPTV 417
DB 359 IGSRIPIGGIINTSTHST--NTSINPVRLSFSRDVYWTESYAGVLWGLIABEIHGVPTV 417
QY 418 LNRPIPIGGLINTSTHSTINPVTLQFTSRDVTESNAGTNI--LFTTPVNGVPA 418
DB 418 LNRPIPIGGLINTSTHSTINPVTLQFTSRDVTESNAGTNI--LFTTPVNGVPA 418
QY 418 RRFRRPONTFEFGTANYSPYSPGQLQDSETELPETTERPNYESISHRLSHIGLIS 477
DB 418 RRFRRPONTFEFGTANYSPYSPGQLQDSETELPETTERPNYESISHRLSHIGLIS 477

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DB 479 GNTLRARVSVWTHRSADRTNTIGNRIITQIPLVKAALNHSVTVVGGGFTGDIIRTNV 538
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DB 539 TGFPGDIRLININVPLOSQRVVRIRYASTDLOFETRINGTTVINGNFSRTNRDNLBYR 598
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DB 599 SFTAGESTPPNLAQSTFTLGAQSFNOEYIDRVFVPAEYTFEAEVDLEBAQAVN 658
QY 658 ALFTNTPRLKTDVTDYHIDQVSNLVACLSDECELDKEKLEKVKYARLSDERNILQ 717
DB 659 ALFTNTPRLKTDVTDYHIDQVSNLVACLSDECELDKEKLEKVKYARLSDERNILQ 718
QY 718 DPNFTSINKOPDPLSTNEGSNFTSIHQSHGWSGNITTOEGNDVPKENYVTLPGTFN 777
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QY 778 ECVPTVLYOKIGSELSKAYTRVYOLRGYIEDSODLEIYLIRYNAKHETLDVPGTESVPLS 837
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DB 959 VDALLFVDSQVNRLOADNTIGMIAADLVHRIEAYISELSVPGVNAELFEELEGHIT 1018
QY 1018 AILSYDARNVVRKGNDFNNGIACNNVKGHVDOOSHRSVLYIPEMEAEVSQAAYVCPGRG 1077
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QY 1078 YILRVTAAYKEGEGCVTTHIENNTDELKPKNCEBEVYPTDGTGNDYTAHQTAACN 1137
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QY 1138 SRNAGYEDAEVDTTASVNVKPYEEBETTYDVARDNHCEYDRGVNPPVPAGVYTELE 1197
DB 1139 SRNAGYEDAEVDTTASVNVKPYEEBETTYDVARDNHCEYDRGVNPPVPAGVYTELE 1198
QY 1198 YPPETDKVMIEIGTEGKFIYDSVELLME 1228
DB 1199 YPPETDKVMIEIGTEGKFIYDSVELLME 1229

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 Job time : 52 secs



GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: May 24, 2005, 14:10:21 ; Search time 164 Seconds  
(without alignments)  
2504.728 Million cell updates/sec

Title: US-10-614-524-2  
Perfect score: 6479  
Sequence: 1 LITSNRKNEITNALSPAV.....IGTEGKIVDSVLLMEER 1228

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 1434725 seqs, 334507595 residues  
Total number of hits satisfying chosen parameters: 1434725

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Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

- Database : Published Applications AA.\*
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  - 2: /cgn2\_6/ptodata/1/pubpaa/PCT\_NEW\_PUB.pep.\*
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  - 19: /cgn2\_6/ptodata/1/pubpaa/US60\_NEW\_PUB.pep.\*
  - 20: /cgn2\_6/ptodata/1/pubpaa/US60\_PUBCOMB.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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3	5912.5	91.3	1227	15	US-10-428-961-63
4	5745	88.7	1228	17	US-10-926-819-8
5	5742	88.6	1228	16	US-10-809-953-10
6	5659.5	87.4	1207	10	US-09-988-462-7
7	5108	78.8	1186	9	US-09-826-660-23
8	3502.5	54.1	1189	10	US-09-972-175-59
9	3502.5	54.1	1189	14	US-10-200-522-59
10	3500.5	54.0	1189	14	US-09-972-175-2
11	3500.5	54.0	1189	14	US-10-200-522-2
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15	3495.5	54.0	1189	17	US-10-926-819-9	Sequence 9, Appli
16	3494.5	53.9	1189	10	US-09-972-175-4	Sequence 4, Appli
17	3494.5	53.9	1189	10	US-09-972-175-6	Sequence 6, Appli
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19	3494.5	53.9	1189	14	US-10-200-522-6	Sequence 6, Appli
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21	3493.5	53.9	1189	14	US-10-500-522-12	Sequence 12, Appli
22	3490.5	53.9	1189	10	US-09-972-175-8	Sequence 8, Appli
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24	3487.5	53.8	1189	10	US-09-972-175-10	Sequence 10, Appli
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40	3460	53.4	1193	10	US-09-997-914-30	Sequence 30, Appli
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42	3460	53.4	1193	15	US-10-672-163-30	Sequence 30, Appli
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ALIGNMENTS

RESULT 1  
US-10-614-524-2  
; Sequence 2, Application US/10614524  
; Publication No. US20040016020A1  
; GENERAL INFORMATION:  
; APPLICANT: Arnaud, Greta  
; APPLICANT: Boels, Annette  
; APPLICANT: Damm, Nicole  
; APPLICANT: Mathieu, Eva  
; APPLICANT: Van Rie, Jeroen  
; TITLE OR INVENTION: Insecticidal proteins from *Bacillus thuringiensis*.  
; FILE REFERENCE: NEMTSUS2  
; CURRENT APPLICATION NUMBER: US/10/614,524  
; CURRENT FILING DATE: 2003-07-08  
; PRIOR APPLICATION NUMBER: US/09/739,243  
; PRIOR FILING DATE: 2000-12-19  
; PRIOR APPLICATION NUMBER: 60/173387  
; PRIOR FILING DATE: 1999-12-28  
; NUMBER OF SEQ ID NOS: 13  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 2  
; LENGTH: 1228  
; TYPE: PRT  
; ORGANISM: *Bacillus thuringiensis*  
US-10-614-524-2  
Query Match 100.0%; Score 6479; DB 15; Length 1228;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 1228; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
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DB 1 LITSNRKNEITNALSPAVSNHSTQMDLSPDRIEDSLCIASGNNINPLVASTVGTGI 60  
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Db      241  S|L|R|G|T|N|A|S|W|R|V|N|O|R|R|D|L|T|G|V|D|L|V|A|L|P|S|Y|D|R|T|Y|P|I|N|S|A|Q|L|T|R|E|V|Y|D|A|G|A|T|G 300
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Db      301  V|N|N|A|S|W|Y|N|N|N|A|P|S|F|A|I|E|T|A|V|I|R|S|P|H|L|D|F|E|Q|L|I|F|S|T|S|R|W|A|T|R|M|Y|W|R|G|H|T|I|Q 360
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Qy      541  V|L|S|G|L|N|F|N|N|T|S|I|O|R|R|V|R|V|R|Y|A|S|Q|T|W|L|R|V|Y|G|S|T|T|D|O|G|P|P|S|T|S|A|N|E|S|L|T|S|Q|R 600
Db      541  V|L|S|G|L|N|F|N|N|T|S|I|O|R|R|V|R|V|R|Y|A|S|Q|T|W|L|R|V|Y|G|S|T|T|D|O|G|P|P|S|T|S|A|N|E|S|L|T|S|Q|R 600
Qy      541  V|L|S|G|L|N|F|N|N|T|S|I|O|R|R|V|R|V|R|Y|A|S|Q|T|W|L|R|V|Y|G|S|T|T|D|O|G|P|P|S|T|S|A|N|E|S|L|T|S|Q|R 600
Db      541  V|L|S|G|L|N|F|N|N|T|S|I|O|R|R|V|R|V|R|Y|A|S|Q|T|W|L|R|V|Y|G|S|T|T|D|O|G|P|P|S|T|S|A|N|E|S|L|T|S|Q|R 600
Qy      601  P|A|E|P|V|G|I|S|A|S|G|Q|T|G|I|S|I|S|N|N|A|G|R|O|T|F|H|D|K|I|E|P|I|P|A|T|E|A|E|T|D|E|R|A|O|E|A|V|A|L|P 660
Db      601  P|A|E|P|V|G|I|S|A|S|G|Q|T|G|I|S|I|S|N|N|A|G|R|O|T|F|H|D|K|I|E|P|I|P|A|T|E|A|E|T|D|E|R|A|O|E|A|V|A|L|P 660
Qy      661  T|N|N|P|R|L|K|T|D|V|Y|H|D|V|S|N|L|V|A|C|L|S|D|E|F|C|D|E|K|R|E|L|E|K|Y|A|K|R|S|D|E|R|N|L|O|D|P|N 720
Db      661  T|N|N|P|R|L|K|T|D|V|Y|H|D|V|S|N|L|V|A|C|L|S|D|E|F|C|D|E|K|R|E|L|E|K|Y|A|K|R|S|D|E|R|N|L|O|D|P|N 720
Qy      721  P|T|S|I|N|Q|O|P|F|I|S|T|N|E|O|S|N|F|T|S|I|H|O|S|E|H|G|W|G|S|E|N|T|I|O|G|N|D|V|F|K|E|N|Y|T|L|P|G|T|R|E|C|Y 780
Db      721  P|T|S|I|N|Q|O|P|F|I|S|T|N|E|O|S|N|F|T|S|I|H|O|S|E|H|G|W|G|S|E|N|T|I|O|G|N|D|V|F|K|E|N|Y|T|L|P|G|T|R|E|C|Y 780
Qy      781  P|T|Y|L|O|K|I|G|S|E|L|K|A|T|R|Y|O|R|G|Y|E|D|S|O|L|E|I|Y|L|R|Y|N|A|K|H|E|T|D|V|P|G|E|S|W|P|L|S|V|E|S 840
Db      781  P|T|Y|L|O|K|I|G|S|E|L|K|A|T|R|Y|O|R|G|Y|E|D|S|O|L|E|I|Y|L|R|Y|N|A|K|H|E|T|D|V|P|G|E|S|W|P|L|S|V|E|S 840
Qy      841  P|I|G|R|C|E|P|R|N|C|A|P|H|F|E|N|P|D|L|D|C|S|R|D|E|K|C|A|H|S|H|F|S|L|D|I|D|I|G|C|T|D|L|H|E|N|L|G|V|V|V|F|K 900
Db      841  P|I|G|R|C|E|P|R|N|C|A|P|H|F|E|N|P|D|L|D|C|S|R|D|E|K|C|A|H|S|H|F|S|L|D|I|D|I|G|C|T|D|L|H|E|N|L|G|V|V|V|F|K 900
Qy      901  I|K|T|O|E|G|H|A|R|I|G|N|T|E|I|B|E|K|P|L|G|B|A|L|S|R|V|K|R|A|E|K|R|D|K|R|E|K|Q|L|E|T|R|Y|T|A|K|E|A|V|D|A 960
Db      901  I|K|T|O|E|G|H|A|R|I|G|N|T|E|I|B|E|K|P|L|G|B|A|L|S|R|V|K|R|A|E|K|R|D|K|R|E|K|Q|L|E|T|R|Y|T|A|K|E|A|V|D|A 960
Qy      961  I|K|T|O|E|G|H|A|R|I|G|N|T|E|I|B|E|K|P|L|G|B|A|L|S|R|V|K|R|A|E|K|R|D|K|R|E|K|Q|L|E|T|R|Y|T|A|K|E|A|V|D|A 960
Db      961  I|K|T|O|E|G|H|A|R|I|G|N|T|E|I|B|E|K|P|L|G|B|A|L|S|R|V|K|R|A|E|K|R|D|K|R|E|K|Q|L|E|T|R|Y|T|A|K|E|A|V|D|A 960
Qy      961  L|P|D|S|O|Y|R|O|A|D|T|N|I|G|H|A|A|D|K|V|R|I|R|E|A|Y|L|S|E|L|S|V|P|G|V|A|N|E|I|F|E|L|E|R|I|T|A|S 1020
Db      961  L|P|D|S|O|Y|R|O|A|D|T|N|I|G|H|A|A|D|K|V|R|I|R|E|A|Y|L|S|E|L|S|V|P|G|V|A|N|E|I|F|E|L|E|R|I|T|A|S 1020
Qy      1021  L|Y|D|A|R|V|N|V|K|D|F|R|N|G|L|A|C|N|V|K|G|H|V|D|V|Q|S|H|R|S|V|L|I|P|E|W|E|A|V|S|Q|A|R|V|C|P|G|R|G|Y|L 1080
Db      1021  L|Y|D|A|R|V|N|V|K|D|F|R|N|G|L|A|C|N|V|K|G|H|V|D|V|Q|S|H|R|S|V|L|I|P|E|W|E|A|V|S|Q|A|R|V|C|P|G|R|G|Y|L 1080
Qy      1081  R|V|A|Y|E|G|E|G|C|Y|T|H|E|I|N|N|T|D|E|L|K|K|C|E|E|B|E|V|P|T|D|T|G|C|N|D|Y|T|A|Q|I|A|V|C|N|S|R|N 1140
Db      1081  R|V|A|Y|E|G|E|G|C|Y|T|H|E|I|N|N|T|D|E|L|K|K|C|E|E|B|E|V|P|T|D|T|G|C|N|D|Y|T|A|Q|I|A|V|C|N|S|R|N 1140
Qy      1141  A|G|E|D|A|Y|E|V|D|T|T|A|S|V|N|Y|K|P|T|E|E|T|Y|D|V|R|D|N|H|C|E|Y|D|G|V|V|N|Y|P|L|P|A|G|Y|W|T|K|E|L|E|Y|P 1200

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Db      1141  A|G|E|D|A|Y|E|V|D|T|T|A|S|V|N|Y|K|P|T|E|E|T|Y|D|V|R|D|N|H|C|E|Y|D|G|V|V|N|Y|P|L|P|A|G|Y|W|T|K|E|L|E|Y|P 1200
Qy      1201  E|T|D|K|W|I|E|I|G|E|T|B|G|R|I|V|D|S|V|E|L|L|M|E|E 1228
Db      1201  E|T|D|K|W|I|E|I|G|E|T|B|G|R|I|V|D|S|V|E|L|L|M|E|E 1228

RESULT 2
US-10-428-961-38
; Sequence 38, Application US/10428961
; Publication No. US20030237111A1
; GENERAL INFORMATION:
; APPLICANT: Baum, James A.
; APPLICANT: Chu, Chih-Rei
; APPLICANT: Donovan, William P.
; APPLICANT: Gilmer, Amy J.
; APPLICANT: Ruper, Mark J.
; TITLE OF INVENTION: Lepidopteran-Active Bacillus thuringiensis Delta-Endotoxin
; TITLE OF INVENTION: Polynucleotides, Compositions, and Methods of Use (Amended)
; FILE REFERENCE: MEC0201--1
; CURRENT APPLICATION NUMBER: US/10/428,961
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: 09/661,322
; PRIOR FILING DATE: 2000-09-13
; PRIOR APPLICATION NUMBER: 60/153,995
; PRIOR FILING DATE: 1999-09-15
; NUMBER OF SEQ ID NOS: 63
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 38
; LENGTH: 1228
; TYPE: PRF
; ORGANISM: Bacillus thuringiensis
US-10-428-961-38

Query Match          99.8%; Score 6464; DB 15; Length 1228;
Best Local Similarity 99.7%; Pred. No. 0;
Matches 1224; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Qy      1  L|T|S|R|K|N|E|N|E|I|N|A|L|S|I|P|A|V|S|H|S|T|O|M|D|L|S|P|D|R|I|D|S|I|C|I|A|E|G|N|N|I|N|P|L|V|A|S|T|Y|Q|T|G|I 60
Db      1  L|T|S|R|K|N|E|N|E|I|N|A|L|S|I|P|A|V|S|H|S|T|O|M|D|L|S|P|D|R|I|D|S|I|C|I|A|E|G|N|N|I|N|P|L|V|A|S|T|Y|Q|T|G|I 60
Qy      61  N|A|G|R|I|L|G|V|G|P|A|Q|I|A|F|Y|S|F|V|G|E|L|P|R|G|R|D|W|E|I|F|L|E|H|V|E|L|I|N|Q|I|T|E|N|A|R|N|T|A 120
Db      61  N|A|G|R|I|L|G|V|G|P|A|Q|I|A|F|Y|S|F|V|G|E|L|P|R|G|R|D|W|E|I|F|L|E|H|V|E|L|I|N|Q|I|T|E|N|A|R|N|T|A 120
Qy      121  L|A|R|O|G|I|G|S|F|R|A|Y|Q|O|S|L|E|D|W|E|N|R|D|A|R|T|R|S|V|L|Y|Q|Y|A|L|E|D|F|I|N|A|P|L|F|A|R|N|Q|E|V|P 180
Db      121  L|A|R|O|G|I|G|S|F|R|A|Y|Q|O|S|L|E|D|W|E|N|R|D|A|R|T|R|S|V|L|Y|Q|Y|A|L|E|D|F|I|N|A|P|L|F|A|R|N|Q|E|V|P 180
Qy      181  L|M|V|Y|A|Q|A|N|H|L|L|R|D|A|S|L|F|S|E|F|G|L|T|S|Q|E|I|Q|Y|E|R|Q|E|V|E|Q|R|D|Y|S|D|Y|C|V|E|W|Y|T|G|L|N 240
Db      181  L|M|V|Y|A|Q|A|N|H|L|L|R|D|A|S|L|F|S|E|F|G|L|T|S|Q|E|I|Q|Y|E|R|Q|E|V|E|Q|R|D|Y|S|D|Y|C|V|E|W|Y|T|G|L|N 240
Qy      241  S|L|R|G|T|N|A|S|W|R|V|N|O|R|R|D|L|T|G|V|D|L|V|A|L|P|S|Y|D|R|T|Y|P|I|N|S|A|Q|L|T|R|E|V|Y|D|A|G|A|T|G 300
Db      241  S|L|R|G|T|N|A|S|W|R|V|N|O|R|R|D|L|T|G|V|D|L|V|A|L|P|S|Y|D|R|T|Y|P|I|N|S|A|Q|L|T|R|E|V|Y|D|A|G|A|T|G 300
Qy      301  V|N|N|A|S|W|Y|N|N|N|A|P|S|F|A|I|E|T|A|V|I|R|S|P|H|L|D|F|E|Q|L|I|F|S|T|S|R|W|A|T|R|M|Y|W|R|G|H|T|I|Q 360
Db      301  V|N|N|A|S|W|Y|N|N|N|A|P|S|F|A|I|E|T|A|V|I|R|S|P|H|L|D|F|E|Q|L|I|F|S|T|S|R|W|A|T|R|M|Y|W|R|G|H|T|I|Q 360
Qy      361  S|R|P|G|G|L|N|T|S|T|G|S|T|N|T|S|I|N|P|R|L|S|F|S|R|D|V|Y|W|T|S|Y|A|G|V|L|M|G|I|Y|L|E|P|I|H|G|V|P|T|V|R|E|N 420
Db      361  S|R|P|G|G|L|N|T|S|T|G|S|T|N|T|S|I|N|P|R|L|S|F|S|R|D|V|Y|W|T|S|Y|A|G|V|L|M|G|I|Y|L|E|P|I|H|G|V|P|T|V|R|E|N 420
Qy      421  F|R|N|P|O|T|F|E|R|G|I|A|N|Y|O|P|Y|E|S|P|G|L|O|K|D|S|E|L|P|E|T|T|R|E|P|N|E|S|Y|S|H|R|S|H|I|G|L|S|Q|R 480
Db      421  F|R|N|P|O|T|F|E|R|G|I|A|N|Y|O|P|Y|E|S|P|G|L|O|K|D|S|E|L|P|E|T|T|R|E|P|N|E|S|Y|S|H|R|S|H|I|G|L|S|Q|R 480
Qy      481  V|H|P|V|Y|S|W|T|H|R|S|A|R|D|R|N|T|I|S|D|S|I|T|O|I|P|L|Y|K|S|F|N|L|S|G|T|S|V|S|G|P|G|T|G|D|I|I|R|T|N|V|N|G|S 540
Db      481  V|H|P|V|Y|S|W|T|H|R|S|A|R|D|R|N|T|I|S|D|S|I|T|O|I|P|L|Y|K|S|F|N|L|S|G|T|S|V|S|G|P|G|T|G|D|I|I|R|T|N|V|N|G|S 540

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QY 541 VLSMGLNFNNTSLQRYRVRVRYAASQTMVLRVTYGSSTPDDQRPSTMSANESLTSQSFR 600
DB 541 VLSMGLNFNNTSLQRYRVRVRYAASQTMVLRVTYGSSTPDDQRPSTMSANESLTSQSFR 600
QY 601 PAEPFVIGISASGOTAGISISNNAGROTHPHDKIEFIPITATPEAXYDLERAQEAVALF 660
DB 601 PAEPFVIGISASGOTAGISISNNAGROTHPHDKIEFIPITATPEAXYDLERAQEAVALF 660
QY 661 TTNTPRRLKTDVTDYTHIDQVSNLVACSDSEFCDEKRELEKVKYAKRLSDBERNLQDPN 720
DB 661 TTNTPRRLKTDVTDYTHIDQVSNLVACSDSEFCDEKRELEKVKYAKRLSDBERNLQDPN 720
QY 721 PFSINQKOPDFTSTNEQSNFTSIHQSEHGMWGSNITIQEGNDVFKENYVTLPGTFNECY 780
DB 721 PFSINQKOPDFTSTNEQSNFTSIHQSEHGMWGSNITIQEGNDVFKENYVTLPGTFNECY 780
QY 781 PFTLYQKIGESBELKAYTRYQLRGYIEDSODLEYILIRYNAKHETLDVPGTESVWPLSVES 840
DB 781 PFTLYQKIGESBELKAYTRYQLRGYIEDSODLEYILIRYNAKHETLDVPGTESVWPLSVES 840
QY 841 PIGRCGEPRNCAPHFENNPDLDCSCRDGECKAHSHHSFLDIDIGCTDLHENLGVWVVF 900
DB 841 PIGRCGEPRNCAPHFENNPDLDCSCRDGECKAHSHHSFLDIDIGCTDLHENLGVWVVF 900
QY 901 IKTOEGHARLGNLEFIEKPLGEBALSRYRAEKMRDKREKQLETKRVYTEAKEAVDA 960
DB 901 IKTOEGHARLGNLEFIEKPLGEBALSRYRAEKMRDKREKQLETKRVYTEAKEAVDA 960
QY 961 LFPDSQYNRLQADTNGIMHAADKLVHRIEAYLSELVTPGVNAEIPFEELEGRITTAIS 1020
DB 961 LFPDSQYNRLQADTNGIMHAADKLVHRIEAYLSELVTPGVNAEIPFEELEGRITTAIS 1020
QY 1021 LYDARVNVKGDFFNGLACMNVKGVNDVQSHRSVLVPIPEWEAEVSOAVRCGREGYL 1080
DB 1021 LYDARVNVKGDFFNGLACMNVKGVNDVQSHRSVLVPIPEWEAEVSOAVRCGREGYL 1080
QY 1081 RVTAYKEGEGECVTIHEIENNTDELKPKNCEEBEVYPDTGTCDNYTAHQTAVCNRSN 1140
DB 1081 RVTAYKEGEGECVTIHEIENNTDELKPKNCEEBEVYPDTGTCDNYTAHQTAVCNRSN 1140
QY 1141 AGEDAEVDTTASVNVKPYTEEBETTDVARDNHCEVDGCVNVPPLPAGVMTKELEYFP 1200
DB 1141 AGEDAEVDTTASVNVKPYTEEBETTDVARDNHCEVDGCVNVPPLPAGVMTKELEYFP 1200
QY 1201 ETDKMWIEIGETGKFTVDSVELLMEER 1228
DB 1201 ETDKMWIEIGETGKFTVDSVELLMEER 1228

RESULT 3
US-10-428-961-63
; Sequence 63, Application US/10428961
; Publication No. US2003023711A1
; GENERAL INFORMATION:
; APPLICANT: Baum, James A.
; APPLICANT: Chu, Chih-Rei
; APPLICANT: Donovan, William P.
; APPLICANT: Gilmer, Amy J.
; APPLICANT: Ruper, Mark J.
; TITLE OF INVENTION: Lepidopteran-Active Bacillus thuringiensis Delta-Endotoxin
; FILE REFERENCE: Polynucleotides, Compositions, and Methods of Use (Amended)
; CURRENT APPLICATION NUMBER: US/10/428, 961
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: 09/661,322
; PRIOR FILING DATE: 2000-09-13
; PRIOR APPLICATION NUMBER: 60/153,995
; PRIOR FILING DATE: 1999-09-15
; NUMBER OF SEQ ID NOS: 63
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 63
; LENGTH: 1227
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TYPE: PRF
ORGANISM: Bacillus thuringiensis
US-10-428-961-63
Query Match 91.3%; Score 5912.5; DB 15; Length 1227;
Best Local Similarity 91.6%; Pred. No. 0;
Matches 1127; Conservative 36; Mismatches 62; Indels 5; Gaps 3;

QY 1 LTSNRKNEIINALSIPAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVASTVQGI 60
DB 1 LTSNRKNEIINALSIPAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVASTVQGI 60
QY 61 NIAGRILIGVCPAGQIASPYSFVLGELMPRGDQWEILEHVEQULINQITENAPNTA 120
DB 61 NIAGRILIGVCPAGQIASPYSFVLGELMPRGDQWEILEHVEQULINQITENAPNTA 120
QY 121 LARLOGDSFRAYQOSLEDMLENRDARRSVLYQYIALLEDPLNAPLPAIRNOEVP 180
DB 121 LARLOGDSFRAYQOSLEDMLENRDARRSVLYQYIALLEDPLNAPLPAIRNOEVP 180
QY 181 LIAVYAQAANIHLILLRDAELFSGSEFGLTSQEIQRYYEROVEQTRDSDYCVWEYNTGLN 240
DB 181 LIAVYAQAANIHLILLRDAELFSGSEFGLTSQEIQRYYEROVEQTRDSDYCVWEYNTGLN 240
QY 241 SLRGTAASVVRXNQPFRRDITLGLVDLVALPSTYDTRTYDINTSAQLTREVYTDAGATG 300
DB 241 SLRGTAASVVRXNQPFRRDITLGLVDLVALPSTYDTRTYDINTSAQLTREVYTDAGATG 300
QY 301 V--NMASMMYNNNABSPSAIEFNAVTRSPHLDPLEBOLTFTSSRSRSATRMTYMGHT 358
DB 301 V--NMASMMYNNNABSPSAIEFNAVTRSPHLDPLEBOLTFTSSRSRSATRMTYMGHT 358
QY 359 IQSRPIGGLANTSTHGSTNTSINPVRLSFSPRDVMTESYAGVILMGIYLEPIHGVPTVR 418
DB 359 IQSRPIGGLANTSTHGSTNTSINPVRLSFSPRDVMTESYAGVILMGIYLEPIHGVPTVR 418
QY 419 FNRNPQNTFERGTANYSPQSPGLQDKOSETLEPETERPNYESYSHRLSHIGLSQ 478
DB 419 FNRNPQNTFERGTANYSPQSPGLQDKOSETLEPETERPNYESYSHRLSHIGLSQ 478
QY 478 SRVHVPYSWTHSASRTNTISSDSITQIPLVYSFNLSGSTSVSGGFGGDIIRNVN 538
DB 478 SRVHVPYSWTHSASRTNTISSDSITQIPLVYSFNLSGSTSVSGGFGGDIIRNVN 538
QY 537 NTLRAPIYSWTHSASRTNTISSDSITQIPLVYSFNLSGSTSVSGGFGGDIIRNVN 537
DB 537 NTLRAPIYSWTHSASRTNTISSDSITQIPLVYSFNLSGSTSVSGGFGGDIIRNVN 537
QY 539 GSVLSMGLNFNNTSLQRYRVRVRYAASQTMVLRVTYGSSTPDDQRPSTMSANESLTSQS 598
DB 539 GSVLSMGLNFNNTSLQRYRVRVRYAASQTMVLRVTYGSSTPDDQRPSTMSANESLTSQS 598
QY 598 FRFAEPFVIGISASGOTAGISISNNAGROTHPHDKIEFIPITATPEAXYDLERAQEAVALF 657
DB 598 FRFAEPFVIGISASGOTAGISISNNAGROTHPHDKIEFIPITATPEAXYDLERAQEAVALF 657
QY 657 LFTNTNPRRLKTDVTDYTHIDQVSNLVACSDSEFCDEKRELEKVKYAKRLSDBERNLQDPN 717
DB 657 LFTNTNPRRLKTDVTDYTHIDQVSNLVACSDSEFCDEKRELEKVKYAKRLSDBERNLQDPN 717
QY 717 PFTLYQKIGESBELKAYTRYQLRGYIEDSODLEYILIRYNAKHETLDVPGTESVWPLSV 837
DB 717 PFTLYQKIGESBELKAYTRYQLRGYIEDSODLEYILIRYNAKHETLDVPGTESVWPLSV 837
QY 837 ESPIGRGCEPRNCAPHFENNPDLDCSCRDGECKAHSHHSFLDIDIGCTDLHENLGVWV 898
DB 837 ESPIGRGCEPRNCAPHFENNPDLDCSCRDGECKAHSHHSFLDIDIGCTDLHENLGVWV 898
QY 898 FKIKTOEGHARLGNLEFIEKPLGEBALSRYRAEKMRDKREKQLETKRVYTEAKEAV 957
DB 898 FKIKTOEGHARLGNLEFIEKPLGEBALSRYRAEKMRDKREKQLETKRVYTEAKEAV 957
QY 957 DALFVDSQYNRLQADTNGIMHAADKLVHRIEAYLSELVTPGVNAEIPFEELEGRITTA 1018
DB 957 DALFVDSQYNRLQADTNGIMHAADKLVHRIEAYLSELVTPGVNAEIPFEELEGRITTA 1018
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Db 958 DAFVDSQVRLQADTNIGMTHAADKLVHRIREAVYSELVIGVNAELFEELEGHITTA 1017  
Qy 1019 ISLYDARNVKNKGDFNNGLACMNVKGVHDVQOQSHRSVLVTPMEAEVSQAVRCPGRGY 1078  
Db 1018 ISLYDARNVKNKGDFNNGLACMNVKGVHDVQOQSHRSVLVTPMEAEVSQAVRCPGRGY 1077  
Qy 1079 ILRVTAYKEGVBGCCTTHIEIENNTDELKFKNCEEEVPTDGTCDNYTAHQGTAVCN 1138  
Db 1078 ILRVTAYKEGVBGCCTTHIEIENNTDELKFKNCEEEVPTDGTCDNYTAHQGTAVCN 1137  
Qy 1139 RNAGYDAVEVDVTTASVNVKPYTEEBEYTDVRBDNCEYRGVNVPLPAGYMTKELEY 1198  
Db 1138 RNAGYDAVEVDVTTASVNVKPYTEEBEYTDVRBDNCEYRGVNVPLPAGYMTKELEY 1197  
Qy 1199 FPETDKWIEIGETEGKFIYDSVELLMEE 1228  
Db 1198 FPETDKWIEIGETEGKFIYDSVELLMEE 1227

RESULT 4  
US-10-926-819-8  
; Sequence 8, Application US/10926819  
; Publication No. US20050049410A1  
; GENERAL INFORMATION:  
; APPLICANT: Carozzi, Nadine  
; APPLICANT: Harzigs, Tracy  
; APPLICANT: Kozziel, Michael G.  
; APPLICANT: Duck, Nicholas B.  
; APPLICANT: Carr, Brian  
; TITLE OF INVENTION: AXMT-003, A Delta-Endotoxin Gene and  
; TITLE OF INVENTION: Methods for Its Use  
; FILE REFERENCE: 045600/281577  
; CURRENT APPLICATION NUMBER: US/10/926, 819  
; CURRENT FILING DATE: 2004-08-26  
; PRIOR APPLICATION NUMBER: 60/498, 518  
; PRIOR FILING DATE: 2003-08-28  
; NUMBER OF SEQ ID NOS: 31  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 8  
; LENGTH: 1228  
; TYPE: PRF  
; ORGANISM: Bacillus thuringiensis serovar entomocidus  
US-10-926-819-8

Query Match 88.7%; Score 5745; DB 17; Length 1228;  
Best local Similarity 89.1%; Pred. No. 0;  
Matches 1098; Conservative 35; Mismatches 90; Indels 10; Gaps 3;  
Qy 1 L7SNRKNENEIINALSIPAVSNHSTOMDLSPPARIEDSLCIAEGNNINPLVSASTVQTGI 60  
Db 1 M7SNRKNENEIIN----AVSNHSAQMDLLPDARIEDSLCIAEGNNIDPVSASTVQTGI 55  
Qy 61 NINGRILGVGVPPAGCIATFYSFLVGEMLPRGRDQWEIFLEHVEQLINOITENANNTA 120  
Db 56 NINGRILGVGVPPAGCIATFYSFLVGEMLPRGRDQWEIFLEHVEQLINOITENANNTA 115  
Qy 121 LARLOGSGDSFRAYQOGLSEJDMLENRDARTRSVLVYTOYIALBELDFLANMLFAIRNOEVP 180  
Db 116 LARLOGSGDSFRAYQOGLSEJDMLENRDARTRSVLVYTOYIALBELDFLANMLFAIRNOEVP 175  
Qy 181 LLMVYAQAANTLHLLLRDASLFGSEFGLTSOEIQRYEROVEOTRDYSDYCVEMWNTGLN 240  
Db 176 LLMVYAQAANTLHLLLRDASLFGSEFGLTSOEIQRYEROVEOTRDYSDYCVEMWNTGLN 235  
Qy 241 SLGNTAASVNRVNRQPFRLDTGLVLDVALPSPYDTRTYTINNSAOLITREYTDALCATG 300  
Db 236 SLGNTAASVNRVNRQPFRLDTGLVLDVALPSPYDTRTYTINNSAOLITREYTDALCATG 295  
Qy 301 VMAASMMWNNVNNAPSFAIEFAVIRSPHLDFLEQLTIFSTSSRWSATRTMTYWRGHTIQ 360  
Db 296 VMAASMMWNNVNNAPSFAIEFAVIRSPHLDFLEQLTIFSTSSRWSATRTMTYWRGHTIQ 355

Qy 361 SRPIGGINTSTHSGNTNISINPVRLSFRSDRYVNTESYGVLLMGVLEPIHGVTVRFN 420  
Db 356 SRPIGGINTSTHSGNTNISINPVRLSFRSDRYVNTESYGVLLMGVLEPIHGVTVRFN 415  
Qy 421 FRNPONTFERGTANTYQAPESPGLQKOSETELPPEPPERPNVYESYSHRLSHIGLSQSR 480  
Db 416 FRNPONTFERGTANTYQAPESPGLQKOSETELPPEPPERPNVYESYSHRLSHIGLSQSR 475  
Qy 481 VAVPVSWTHRSADRTNTI SSDITQIPLVKSFNLSGTSVVSQPGFTGGDITRTVNGS 540  
Db 476 VAVPVSWTHRSADRTNTI GPNRIQI PMVKASSELQGTIVVRGPGFTGGDILRRNTTG 535  
Qy 541 VLSMGLNENNTSLQRRVAVRYAASQTMVLRATVGGSTTFDQGPSTMSANESLTSQSPR 600  
Db 536 FGPRIKTVAGPLTQRRIRIPRYASTVDPDFVSRGGTIVNNRRLRTMNSGDLKGNFY 555  
Qy 601 FAFBPVGISASGSO-TAGISISNNAQRQTFHPDKIEFIFTATFEAYDLERAQBAVNAL 659  
Db 596 RAFTTPTFTFQIQDIIIRTSIGLSENGSVYIDKIEIIPVTAFFEAAYDLERAQBAVNAL 655  
Qy 660 FTNTNPRRLKTDVTDYHIDQVSNLVACLSDFCLDEKRELLKVKYAKLSDERNLLODP 719  
Db 656 FTNTNPRRLKTDVTDYHIDQVSNLVACLSDFCLDEKRELLKVKYAKLSDERNLLODP 715  
Qy 720 NFPSINKQDPFTSTNGSNFTSIHESSEKMGWSEMITTOEGNDVKEKNVYTLPGTFNEC 779  
Db 716 NFPSINKQDPFTSTNGSNFTSIHESSEKMGWSEMITTOEGNDVKEKNVYTLPGTFNEC 775  
Qy 780 YPTLYQKIGESSELKAYTRYQLRGYEDSQDLEIYLRNNAKHETLDVPGTESVWPLSYE 839  
Db 776 YPTLYQKIGESSELKAYTRYQLRGYEDSQDLEIYLRNNAKHETLDVPGTESVWPLSYE 835  
Qy 840 SPIRGCEBNRCAHPHEWNPDLDCSCRDGEKCAHSHFSLDIDICTDLHENLGVWVVF 899  
Db 836 SPIRGCEBNRCAHPHEWNPDLDCSCRDGEKCAHSHFSLDIDICTDLHENLGVWVVF 895  
Qy 900 KITQOGHARLNLTEIEKEKPLLEALSRVKAEEKWRKREKLOLETRVYVYEAKEYD 959  
Db 896 KITQOGHARLNLTEIEKEKPLLEALSRVKAEEKWRKREKLOLETRVYVYEAKEYD 955  
Qy 960 ALFVDSQVNRLOADTNI GMIHAADKLVHRIREAVYSELVIGVNAELFEELEGHITTA 1019  
Db 956 ALFVDSQVNRLOADTNI GMIHAADKLVHRIREAVYSELVIGVNAELFEELEGHITTA 1015  
Qy 1020 SLYDARNVKNKGDFNNGLACMNVKGVHDVQOQSHRSVLVTPMEAEVSQAVRCPGRGY 1079  
Db 1016 SLYDARNVKNKGDFNNGLACMNVKGVHDVQOQSHRSVLVTPMEAEVSQAVRCPGRGY 1075  
Qy 1080 ILRVTAYKEGVBGCCTTHIEIENNTDELKFKNCEEEVPTDGTCDNYTAHQGTAVCN 1138  
Db 1076 ILRVTAYKEGVBGCCTTHIEIENNTDELKFKNCEEEVPTDGTCDNYTAHQGTAVCN 1135  
Qy 1136 CNSRNAGYDAVEVDVTTASVNVKPYTEEBEYTDVRBDNCEYRGVNVPLPAGYMTKE 1195  
Db 1136 CNSRNAGYDAVEVDVTTASVNVKPYTEEBEYTDVRBDNCEYRGVNVPLPAGYMTKE 1195  
Qy 1196 LBYFPETDKWIEIGETEGKFIYDSVELLMEE 1228  
Db 1196 LBYFPETDKWIEIGETEGKFIYDSVELLMEE 1228

RESULT 5  
US-10-809-953-10  
; Sequence 10, Application US/10809953  
; Publication No. US20040181825A1  
; GENERAL INFORMATION:  
; APPLICANT: Van Meilaert, Herman  
; APPLICANT: Botterman, Johan  
; APPLICANT: Van Rie, Jeroen  
; APPLICANT: Joos, Henk  
; TITLE OF INVENTION: RECOMBINANT PLANT EXPRESSING NON-COMPETITIVELY BINDING Bc INSECTIC  
; FILE REFERENCE: 021565-078



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CURRENT APPLICATION NUMBER: US/10/809,953
CURRENT FILING DATE: 2004-03-26
PRIOR APPLICATION NUMBER: US/09/661,016
PRIOR FILING DATE: 2000-09-13
PRIOR APPLICATION NUMBER: PCT/EP90/00905
PRIOR FILING DATE: 1990-05-30
PRIOR APPLICATION NUMBER: GB 89401499.2
PRIOR FILING DATE: 1989-05-31
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patent in Ver. 2.0
SEQ ID NO 10
LENGTH: 1228
TYPE: PR
ORGANISM: Bacillus thuringiensis
US-10-809-953-10

Query Match      88.6%; Score 5742; DB 16; Length 1228;
Best Local Similarity 89.1%; Pred. No. 0;
Matches 1098; Conservative 35; Mismatches 90; Indels 10; Gaps 3;

QY 1 LTNRRKNEEIIINALSIPAVSNHSTONDLSPDARIEDSLCIABGNINPLVASTVQGI 60
DB 1 LTNRRKNEEIIIN-----AVSNHSAQMDLLPDARIEDSLCIABGNINPLVASTVQGI 55
QY 61 NINGRILGVGVPPAGQIASPFSFLVGEMLPRGDDQWEITLHVEQLINQITENANNTA 120
DB 56 NINGRILGVGVPPAGQIASPFSFLVGEMLPRGDDQWEITLHVEQLINQITENANNTA 115
QY 121 LARLOGGDSFRAVQOGLSEDMLENRDPARTRSVLYTQYIALEIDFLNAPLPAIRNOEVP 180
DB 116 LARLOGGDSFRAVQOGLSEDMLENRDPARTRSVLYTQYIALEIDFLNAPLPAIRNOEVP 175
QY 181 LLMVYAQAANLHLLRLDASLFGSEFGLTSQEIQRYYEROVEQTRDYSDYCEVMTGLN 240
DB 176 LLMVYAQAANLHLLRLDASLFGSEFGLTSQEIQRYYEROVEQTRDYSDYCEVMTGLN 235
QY 241 SLRGTAASVRYNORRDLTLGLVDLVALPESYDTRTPYINTSAQITREVTDAIGATG 300
DB 236 SLRGTAASVRYNORRDLTLGLVDLVALPESYDTRTPYINTSAQITREVTDAIGATG 295
QY 301 VNMAANNNNNNA PSSAIEETAVIRSPHLLDPLEQLITPSSRMSATRMHTWRGHTIQ 360
DB 296 VNMAANNNNNNA PSSAIEETAVIRSPHLLDPLEQLITPSSRMSATRMHTWRGHTIQ 355
QY 361 SRPISGLNTSTHSTNTSINPRLSPFSRDVYTESYAGVLLMGIYLPFHGVPTFRFN 420
DB 356 SRPISGLNTSTHSTNTSINPRLSPFSRDVYTESYAGVLLMGIYLPFHGVPTFRFN 415
QY 421 FNNPONTFERGTANYGQYSPGQLQKDSSTELPPETTERPNYESYSHRLSHIGLSQSR 480
DB 416 FNNPONTFERGTANYGQYSPGQLQKDSSTELPPETTERPNYESYSHRLSHIGLSQSR 475
QY 481 VHVRYVSMTHRSADRNNTSSDSITQIPLKSFNLSGTSVSGPRTGDDIIRTNVGS 540
DB 476 VHVRYVSMTHRSADRNNTSSDSITQIPLKSFNLSGTSVSGPRTGDDIIRTNVGS 535
QY 541 VLSMGLNPNNTSLQRYRVRVRYAASQTMVRYTVGSGSTPDQGFPSMTANESLTSQSR 600
DB 536 FGPRTVYNGPLQRRRIGRGRVASTYDPDFVSRGGCTVNNRFLRTMSGDELKGNFV 595
QY 601 PAFEPVGISASGQ-TAGISISNNAQRQTFHPDKIEFIPITATFEAYDLERAQEAVAL 659
DB 596 RRAFTPTPTPTQODIIRTSIQGLSGNGEYIDKIEIIPVATFEAYDLERAQEAVAL 655
QY 660 FNTNRRRLKTDVTDVHIQOVSNLVACLSDEFLDERELLEYKAKRLSDERNLQDP 719
DB 656 FNTNRRRLKTDVTDVHIQOVSNLVACLSDEFLDERELLEYKAKRLSDERNLQDP 715
QY 720 NPTSINKQDPFISTNQSNFTSIHQSEHGMGSENITIOEGNDVPKENYVLPGFNEC 779
DB 716 NPTSINKQDPFISTNQSNFTSIHQSEHGMGSENITIOEGNDVPKENYVLPGFNEC 775
QY 780 YPTLYYOKIGESBELKATRYQLRGYIEDSQDLEIYLIRYNAKHETLDVPGTESVWPLSV 839

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DB 776 YPTLYYOKIGESBELKATRYQLRGYIEDSQDLEIYLIRYNAKHETLDVPGTESVWPLSV 835
QY 840 SPIGRCEPNRCAHPHEMNPDLDCSCDGEKCAHSHHFSLIDIGCTDLHENVVWVF 899
DB 836 SPIGRCEPNRCAHPHEMNPDLDCSCDGEKCAHSHHFSLIDIGCTDLHENVVWVF 895
QY 900 KINTQEGHARLGNLEFIEEKLJGELSRVRAEKRRDRERQLETKRYTEAKEAVD 959
DB 896 KINTQEGHARLGNLEFIEEKLJGELSRVRAEKRRDRERQLETKRYTEAKEAVD 955
QY 960 ALPVDQYNRLQADTNIGTHAADKLVHRIRREAYLSLSTYIPGVNAIFPELERRITAI 1019
DB 956 ALPVDQYNRLQADTNIGTHAADKLVHRIRREAYLSLSTYIPGVNAIFPELERRITAI 1015
QY 1020 SLVDARVYVNGGPNNGLACMNVKGYDVQOQSHRSVLYVPEMEAEVSOAVRVCGRGYI 1079
DB 1016 SLVDARVYVNGGPNNGLACMNVKGYDVQOQSHRSVLYVPEMEAEVSOAVRVCGRGYI 1075
QY 1080 LRYTAYKEGYGBCVTHIEIENNTDELKFNCEEEVYPTDGTGNDYTAHOGTA---V 1135
DB 1076 LRYTAYKEGYGBCVTHIEIENNTDELKFNCEEEVYPTDGTGNDYTAHOGTA---V 1135
QY 1136 CNSRNAGYEDAYVDTTASVNYKPYTEETTYTVRRDNHCEYDRGYNYPPLPAGYTK 1195
DB 1136 CNSRNAGYEDAYVDTTASVNYKPYTEETTYTVRRDNHCEYDRGYNYPPLPAGYTK 1195
QY 1196 LKYEPTDKWIEIGETGKFIYDSVELLMEE 1228
DB 1196 LKYEPTDKWIEIGETGKFIYDSVELLMEE 1228

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RESULT 6
US-09-988-462-7
Sequence 7, Application US/09988462
Publication No. US20030046726A1
GENERAL INFORMATION:
APPLICANT: Kozziel, Michael G.
Desai, Nafinl M.
Lewis, Kelly S.
Kramer, Vance C.
Warren, Gregory W.
Evola, Stephen V.
Crossland, Lyle D.
Wright, Martha S.
Merlin, Ellis J.
Lauris, Karen L.
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
INSECTICIDAL ACTIVITY IN MAIZE
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSER: Syngenta Biotechnology, Inc.
STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: NC
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/988,462
FILING DATE: 20-No. US20030046726A1-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 09/547,422
FILING DATE: 11-Apr-2000
APPLICATION NUMBER: US 08/459,504
FILING DATE: 02-JUN-1995
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992

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APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Meigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: S-188051
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 541-8587
TELEFAX: (919) 541-8689
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 1207 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 7:
US-09-988-462-7

Query Match      87.4%; Score 5659.5; DB 10; Length 1207;
Best Local Similarity 89.4%; Pred. No. 0;
Matches 1079; Conservative 34; Mismatches 89; Indels 5; Gaps 2;

QY 27 MOLSPARIEDSCIRAGNNINPLVSASTVQTGTINIGRIIGVLPAGQIASFYSEFLV 86
DB 1 MDLPPARIEDSCIRAGNNIDPFVASTVQTGTINIGRIIGVLPAGQIASFYSEFLV 60
QY 87 GELMPGRDQWEIPLHEVQLINQOITENARNATALAQIGDSFRAYQOSLEDWLENRD 146
DB 61 GELMPGRDQWEIPLHEVQLINQOITENARNATALAQIGDSFRAYQOSLEDWLENRD 120
QY 147 DARTSVLYTQYIALBLDFLNAMPFLAIRNOEVLPMVYQOANHLHLRLDLSFGSER 206
DB 121 DARTSVLYTQYIALBLDFLNAMPFLAIRNOEVLPMVYQOANHLHLRLDLSFGSER 180
QY 207 GLTSOEIORYERQVEOTRPSDYCYEWNTGNSLRGTAAASWVRNOFRDLTGLVD 266
DB 181 GLTSOEIORYERQVEOTRPSDYCYEWNTGNSLRGTAAASWVRNOFRDLTGLVD 240
QY 267 LVALLPSPYDRTYPINTSAQLTREVTYDAIGATGVNNAASNNVNNNAPSFAIETAVIRS 326
DB 241 LVALLPSPYDRTYPINTSAQLTREVTYDAIGATGVNNAASNNVNNNAPSFAIETAVIRS 300
QY 327 PHLLDLPEQLTITSTSRKATNTMTYWRGHTTQSRIGGLNTSTHGSTNTSINPRLS 386
DB 301 PHLLDLPEQLTITSTSRKATNTMTYWRGHTTQSRIGGLNTSTHGSTNTSINPRLS 360
QY 387 FFSRDVYMTESYAGVILMGVLYLEPIHGVPTVRFNRFPONTFERGTANYGQPEPGLQ 446
DB 361 FFSRDVYMTESYAGVILMGVLYLEPIHGVPTVRFNRFPONTFERGTANYGQPEPGLQ 420
QY 447 KDSETELPETTERPNYESYSHRLSHIGLSQSRVHVVPVSWTRSDRNTTSSDSITQ 506
DB 421 KDSETELPETTERPNYESYSHRLSHIGLSQSRVHVVPVSWTRSDRNTTSSDSITQ 480
QY 507 IPLVSEFNLSGTSVVSQPGFTGDIIRTVNGSVLSMGLFNNTSLQRRVRRVYASQ 566
DB 481 IPLVSEFNLSGTSVVSQPGFTGDIIRTVNGSVLSMGLFNNTSLQRRVRRVYASQ 540
QY 567 TMTLRVTVGGSTPFDQGFSTMSANESLTSQSFPAFPVIGISASGSO-TAGSISNNAG 625
DB 541 DDPFVFSRGGTAVNNFRFLRTMNSGDELKGNFRRAPFTTPTFTQIQDIIRTSIQGLSG 600
QY 626 RQTFHPDKIEPIPTATFEAEYDLERAQEAVALFTNTNPRRLKTDVTDVHIQVSNLVA 685
DB 601 NGEVYIDKIEIIPYATFEAEYDLERAQEAVALFTNTNPRRLKTDVTDVHIQVSNLVA 660
QY 686 CLSDEFCLEDERRELEKYAKRLSDERNLIQDNFTSINKQDPFISTNQSNTS:IHQ 745
DB 661 CLSDEFCLEDERRELEKYAKRLSDERNLIQDNFTSINKQDPFISTNQSNTS:IHQ 720
QY 746 SEHGWMGSENIITQEGNDVFKENYVTLPGTFNECYPYLYOKIGESLKAATRYROLAGY 805
DB 721 SEHGWMGSENIITQEGNDVFKENYVTLPGTFNECYPYLYOKIGESLKAATRYROLAGY 780

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QY 806 EDSODLEIYLIRYNAKHETLDPGCTESVWPLSVESPIGRGCEPNRCAPHEWNPDLDCSC 865
DB 781 EDSODLEIYLIRYNAKHETLDPGCTESLWPLSVESPIGRGCEPNRCAPHEWNPDLDCSC 840
QY 866 RGEKCAHSHHPSLSDIDIGCTDLHENLGVWVVFYKIQTOEGHARLGNLFIEBKPLLGEA 925
DB 841 RGEKCAHSHHPSLSDIDIGCTDLHENLGVWVVFYKIQTOEGHARLGNLFIEBKPLLGEA 900
QY 926 LSRVYKAEKWDKREKQLQETKRYVTEAKEAVDALFVDSQYNRLQADTNIGIHADKL 985
DB 901 LSRVYKAEKWDKREKQLQETKRYVTEAKEAVDALFVDSQYNRLQADTNIGIHADKL 960
QY 986 VHRIRAYISELSVLPGVNAEIPFELBGRITIRLSYDARNVYKNDPNNGLACMNVKGH 1045
DB 961 VHRIRAYISELSVLPGVNAEIPFELBGRITIRLSYDARNVYKNDPNNGLACMNVKGH 1020
QY 1046 VDVQOSHHRSVLYPMEBAVSQAVVCPGRGYILKVTAYAKEGYGCCTYIHEINNTDE 1105
DB 1021 VDVQOSHHRSVLYPMEBAVSQAVVCPGRGYILKVTAYAKEGYGCCTYIHEINNTDE 1080
QY 1106 LKFKCEBEVEYPTDGTGNDYTAHQGA----VCNSRNAGYEDAYEVDTTASVNYKPY 1161
DB 1081 LKFKCEBEVEYPTDGTGNDYTAHQGTAGCADACNSRNAGYEDAYEVDTTASVNYKPY 1140
QY 1162 EBEYTTVDVRDNHCEYDRGVNYPPLPAGYMTKELEYFPETDKWYIEIGTEBKFTVDSV 1221
DB 1141 EBEYTTVDVRDNHCEYDRGVNYPPLPAGYMTKELEYFPETDKWYIEIGTEBKFTVDSV 1200
QY 1222 ELLLMEE 1228
DB 1201 ELLLMEE 1207

RESULT 7
US-09-826-660-23
; Sequence 23, Application US/09826660
; Patent No. US20010026940A1
; GENERAL INFORMATION:
; APPLICANT: Cardineau, Guy A.
; APPLICANT: Steilman, Steven J.
; APPLICANT: Narva, Kenneth B.
; TITLE OF INVENTION: Plant-Optimized Genes Encoding Peestcidal Toxins
; FILE REFERENCE: MA-714XC2D1
; CURRENT APPLICATION NUMBER: US/09/826,660
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/178,252
; PRIOR FILING DATE: 1998-10-23
; PRIOR APPLICATION NUMBER: 60/065,215
; PRIOR FILING DATE: 1997-11-12
; PRIOR APPLICATION NUMBER: 60/076,445
; PRIOR FILING DATE: 1998-03-02
; NUMBER OF SEQ ID NOS: 27
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1186
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Toxin encoded by synthetic B.c. gene
US-09-826-660-23

Query Match      78.8%; Score 5108; DB 9; Length 1186;
Best Local Similarity 80.6%; Pred. No. 0;
Matches 995; Conservative 76; Mismatches 108; Indels 56; Gaps 8;

QY 1 LTRNRKQNEFIINALIIPAVSNHSTQMDLSPDARIEDSLCIAGNNINPLVASTVQTGI 60
DB 1 MTSNRKNEFIINALIIPAVSNHSAQMDLSTDAIEDSLCIAGNNIDPFVASTVQTGI 60
QY 61 NIGRIIGVTVGPAGQIASFYSEFLVGEIPLMPGRDQWEIPLHEVQLINQOITENARNTA 120
DB 61 NIGRIIGVTVGPAGQIASFYSEFLVGEIPLMPGRDQWEIPLHEVQLINQOITENARNTA 120

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QY 121 LALQIGSGSPRAYQOSLEDMLENRDDARTRSVLYTOYIALBELDFNAMPLFAIRNOEVP 180
DB 121 LALQIGSGSPRAYQOSLEDMLENRDDARTRSVLYTOYIALBELDFNAMPLFAIRNOEVP 180
QY 181 LLMVYQAAHLILLRLDASLFGSEBGLTQOEIORYVERQVEQRODSYCVENYNTGLN 240
DB 181 LLMVYQAAHLILLRLDASLFGSEBGLTQOEIORYVERQVEQRODSYCVENYNTGLN 240
QY 241 SLRGTAASVVRVYQOPRDLTLGLDLVALPSPYDTRTPYINTSAQLTREYTDAGATG 300
DB 241 SLRGTAASVVRVYQOPRDLTLGLDLVALPSPYDTRTPYINTSAQLTREYTDAGATG 300
QY 301 V--NMASMNYYNNAPFSALIEYAVIRSPHLDELQITISTSSRMSATRHMYTRGHT 358
DB 301 APGSPASTMFWNNAPFSALIEAIVIRPHILDPBEGULTFVSLSRMSNTQYNNYVWGH 360
QY 359 IOGRPPGGGLANTHSGTNTSINPVLSFSPSDYVWTESYAGVLMGITYLEPHGVPTVR 418
DB 359 IOGRPPGGGLANTHSGTNTSINPVLSFSPSDYVWTESYAGVLMGITYLEPHGVPTVR 418
QY 419 FNRNPNTPERGTANSPQYSPGLQKQSETELPEPETERPYRESYSHLSHIGLSIQ 478
DB 419 FNRNPNTPERGTANSPQYSPGLQKQSETELPEPETERPYRESYSHLSHIGLSIQ 478
QY 479 SRVHPVYSWTHRSADRTNTISSDSITQIPLVKSFNLSGTSVSGPGFTGDIIRTNVN 538
DB 479 NTLRAPIVSWTHRSADRTNTISSDSITQIPLVKSFNLSGTSVSGPGFTGDIIRTNVN 537
QY 539 GSIVLSGMLNNNTSLQRYRVRYVYVYVYVYVYVYVYVYVYVYVYVYVYVYVYVY 598
DB 539 GSIVLSGMLNNNTSLQRYRVRYVYVYVYVYVYVYVYVYVYVYVYVYVYVYVY 597
QY 599 PREAPFPVGSASGSOTAGISISNNAGROTFHFQDKIEPITATFEKRYVLEBAQAVNA 658
DB 599 PREAPFPVGSASGSOTAGISISNNAGROTFHFQDKIEPITATFEKRYVLEBAQAVNA 657
QY 659 LFTNTPRRLKTDVTHIDVQSNLVACLSDEFCLDEKRELSEKVKAKLSDERNLLQD 718
DB 659 LFTNTPRRLKTDVTHIDVQSNLVACLSDEFCLDEKRELSEKVKAKLSDERNLLQD 717
QY 719 PNTSINKQDPFIETNEQSNFTSIHSESHGMMGSENITIQEGNDVFKENYVTLPGTFNE 778
DB 719 PNTSINKQDPFIETNEQSNFTSIHSESHGMMGSENITIQEGNDVFKENYVTLPGTFNE 759
QY 779 CPTTYLYOKIGSESELKATRYVOLRGYIETSDOLEYILIRYNAGHEITLDVGTSSWPLSV 838
DB 779 CPTTYLYOKIGSESELKATRYVOLRGYIETSDOLEYILIRYNAGHEITLDVGTSSWPLSV 819
QY 839 ESPFGRGCEBPNRCAPHEWNPDLDCSCRDGKCAHSHHPSLIDIGCTDLHENLGVWVY 898
DB 839 ESPFGRGCEBPNRCAPHEWNPDLDCSCRDGKCAHSHHPSLIDIGCTDLHENLGVWVY 853
QY 899 FKITQEGHARLGNLEPIEBKPLLGALSRYVKAEEKMRDKREKOLETRKYVTEAKEAV 958
DB 899 FKITQEGHARLGNLEPIEBKPLLGALSRYVKAEEKMRDKREKOLETRKYVTEAKEAV 913
QY 959 DALFVNSQVDRLOADPNIGMIHAADLVYIRIRAYISELSVIRGVNAATIEEBEGRIITA 1018
DB 959 DALFVNSQVDRLOADPNIGMIHAADLVYIRIRAYISELSVIRGVNAATIEEBEGRIITA 973
QY 1019 ISLYDARVNVKQNDPNNGLACNVYKGVHDV--QOSSHRSVLVPEWEAEVSOAVRCPGRG 1077
DB 1019 ISLYDARVNVKQNDPNNGLACNVYKGVHDV--QOSSHRSVLVPEWEAEVSOAVRCPGRG 1033
QY 1078 YILRYVAYKEGEGCVTTHIEINNTDELKFKNCEEVEYPTDGTGNDYTA---HOGT 1133
DB 1078 YILRYVAYKEGEGCVTTHIEINNTDELKFKNCEEVEYPTDGTGNDYTA---HOGT 1093
QY 1134 AYCNSSNAGVEDYVEDTASVYKPYEBEYTTVDVRDNHCYDVGYNVYPLPAGYNT 1193
DB 1134 AYCNSSNAGVEDYVEDTASVYKPYEBEYTTVDVRDNHCYDVGYNVYPLPAGYNT 1151
QY 1094 --YTSNRNGIDGAYESNSVPAVYASAYEBKATYDGRDNPCESNRNGYGYTLPAGYNT 1151

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QY 1194 KELEYFETDKWMEIGETEGKPIVDSVELLMEE 1228
DB 1152 KELEYFETDKWMEIGETEGKPIVDSVELLMEE 1186

RESULT 8
US-09-972-175-59
? Sequence 59, Application US/09972175
? Publication No. US20030101482A1
? GENERAL INFORMATION:
?   APPLICANT: Baum, James A.
?               Gilmer, Amy Jelen
?               Mettus, Anne-Marie Light
? TITLE OF INVENTION: TRANSGENIC PLANTS EXPRESSING
?                     LEPIDOPTERAN-ACTIVE-DELTA-ENDOTOXINS
? NUMBER OF SEQUENCES: 76
? CORRESPONDENCE ADDRESS:
?   ADDRESSEE: Arnold, White & Durkee
?   STREET: P.O. Box 4433
?   CITY: Houston
?   STATE: Texas
?   COUNTRY: USA
?   ZIP: 77210
? COMPUTER READABLE FORM:
?   MEDIUM TYPE: Floppy disk
?   COMPUTER: IBM PC compatible
?   OPERATING SYSTEM: PC-DOS/MS-DOS
?   SOFTWARE: Patent In Release #1.0, Version #1.30
? CURRENT APPLICATION DATA:
?   APPLICATION NUMBER: US/09/972,175
?   FILING DATE: 05-Oct-2001
?   CLASSIFICATION: <Unknown>
? PRIOR APPLICATION DATA:
?   APPLICATION NUMBER: 09/337,635
?   FILING DATE: <Unknown>
? ATTORNEY/AGENT INFORMATION:
?   NAME: Kitchell, Barbara S.
?   REGISTRATION NUMBER: 33,928
?   REFERENCE/DOCKET NUMBER: MECO:206
? TELECOMMUNICATION INFORMATION:
?   TELEPHONE: 512/418-3000
?   TELEFAX: 512/474-7577
? INFORMATION FOR SEQ ID NO: 59:
?   SEQUENCE CHARACTERISTICS:
?     LENGTH: 1189 amino acids
?     TYPE: amino acid
?     TOPOLOGY: linear
?     MOLECULAR TYPE: protein
?   SEQUENCE DESCRIPTION: SEQ ID NO: 59:
US-09-972-175-59

Query Match      54.1%; Score 3502.5; DB 10; Length 1189;
Best Local Similarity 57.0%; Pred. No. 2e-259;
Matches 717; Conservative 143; Mismatches 289; Indels 109; Gaps 20;

QY 7 NENEII--NALSTPANSNSTQWDLSPDARIESLSLGIASNNMNPVLSASTVGTGNIAG 64
DB 5 NMQQCIPINCLS-----NPEVYLDGERISTGN-----SSIDISLVO 43
QY 65 RIVGVGVFAGQIASFSLVGLWELMPRGQWEIFLEHVEQLINQOITENANNTALRL 124
DB 44 FLVSNR-VFGGGLVGLIDPFWGIVGP---SQMDATLVQIEQLINRIAEFANNAIANT 99
QY 125 QGIGDSFPAYQOSLEWLENRDDARTRSVLYTOYIALBELDFNAMPLFAIRNOEVP 184
DB 100 EGLGNFNTVVEAFKEMEDPNPNPATRTVIRFRILDIGLERDIPSAISGFEVPLSV 159
QY 185 YQAAHLILLRLDASLFGSEBGLTQOEIORYVERQVEQRODSYCVENYNTGLNSLNG 244
DB 160 YQAAHLILLRLDASLFGSEBGLTQOEIORYVERQVEQRODSYCVENYNTGLNSLNG 219
QY 245 TNAASVVRVYQOPRDLTLGLDLVALPSPYDTRTPYINTSAQLTREYTDAGATGAVNA 304
DB 245 TNAASVVRVYQOPRDLTLGLDLVALPSPYDTRTPYINTSAQLTREYTDAGATGAVNA 304

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Db 612 IILADATFEASDLERAQKAVNALFTSSNQLGKTDVTDVHIDOVSNLVDCLSPEDLDE 671
Qy 696 KRELLEKVKYAKRLSDERNLLQDPNFTSINKQDPFISTNEQSNFTSIHESHEGMCSEN 755
Db 672 KRELSEKVKAKRLSDERNLLQDPNFRGINRQDP-----RGMRGSTD 713
Qy 756 ITIOEGNDVFKENYVTLPGTPNECYPTLYLQKIGESLAKATRYQLRGYIEDSODLEIYL 815
Db 714 ITIOGGDVKENYVTLPGTVDECYPTLYLQKIDESLAKATRYELRGYIEDSODLEIYL 773
Qy 816 IRYNAKHETLDVPGTESVMPLESVSPIGRGEPRNCAPHFEMNPDLDSCRDGEKCAHNS 875
Db 774 IRYNAGHEIYNVGTSLMPLSASPSIGKGEPRNCAPHLEMPDLDSCRDGEKCAHNS 833
Qy 876 HHESLDIGCTDLHENTLGVVVFVKITQEGHARLGNLEIEEKPLGELASRYKAEKK 935
Db 834 HHETLDIVGCTDLNEDLGVVVFVKITQEGHARLGNLEIEEKPLGELALARYKAEKK 893
Qy 936 WRDKRELOJETGRVYTEAKEAVDALFVDSQYRNLQADTNIGMTHADKLVHRIREAYLS 995
Db 894 WRDKRELOJETIYVKEAKESVDALFVNSQYDRLQVDTNIMITHADKLVHRIREAYLP 953
Qy 996 ELASVIGVNAEIFEELGRIITTAISLYDANVYVNGDPFNNGLACMVKGHVYV-QOSHR 1054
Db 954 ELASVIGVNAEIFEELGRIFTAYSLYDANVYVNGDPFNNGLCMVKGHVDEBQNNHR 1013
Qy 1055 SYLVIEBMEAVSOAVRCPGRGIIKLVTAHYKEAGYGCCTYIHIENNTDELKFNCEEE 1114
Db 1014 SYLVIEBMEAVSOAVRCPGRGIIKLVTAHYKEAGYGCCTYIHIENNTDELKFNCEVEE 1073
Qy 1115 EYVPTGTGNDYTA---HGTAVCNRRAGYEDAVEVDTTASVNYKPYEEETTVDR 1170
Db 1074 EYVPTGTGNDYTA---HGTAVCNRRAGYEDAVEVDTTASVNYKPYEEETTVDR 1131
Qy 1171 RDHCEYDGVYVYPLPAGYMTKELEYEPETDKWIEIGETGKPIVDSVELLMEE 1228
Db 1132 RENCESNKGIDYTPAGYVTKDLEYEPETDKWIEIGETGKPIVDSVELLMEE 1189

```

## RESULT 10

US-09-972-175-2

Sequence 2, Application US/09972175

Publication No. US20030101482A1

GENERAL INFORMATION:

APPLICANT: Baum, James A.

Gilmer, Amy Jelen

Mettus, Anne-Marie Light

TITLE OF INVENTION: TRANSGENIC PLANTS EXPRESSING

LEPIDOPTERAN-ACTIVE-DELTA-ENDOTOXINS

NUMBER OF SEQUENCES: 76

CORRESPONDENCE ADDRESS:

ADDRESSEE: Arnold, White &amp; Durkee

STREET: P.O. Box 4433

CITY: Houston

STATE: Texas

COUNTRY: USA

ZIP: 77210

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent in Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/972,175

FILING DATE: 05-Oct-2001

CLASSIFICATION: &lt;Unknown&gt;

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 09/337,635

FILING DATE: &lt;Unknown&gt;

ATTORNEY/AGENT INFORMATION:

NAME: Kitchell, Barbara S.

REGISTRATION NUMBER: 33,928

REFERENCE/DOCKET NUMBER: MECO:206

```

TELECOMMUNICATION INFORMATION:
TELEPHONE: 512/418-3000
TELEFAX: 512/474-7577
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1189 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-972-175-2

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Query Match 54.0%; Score 3500.5; DB 10; Length 1189;
Best Local Similarity 57.0%; Pred. No. 2.8e-259;
Matches 717; Conservative 143; Mismatches 289; Indels 109; Gaps 20;

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Qy 7 NENEII--NALSTIPVNSHTQWDLSDAIEISLCAIEENNNINPLVSATVQGINIAG 64
Db 5 NQOCIPNCLIS-----NPEVLLDGERISTGN-----SSIDISLSLVQ 43
Qy 65 RIIGVLGVPPAGQIASFYSFLVGLMPPGRDWEIFLEHYEQILNQITENARTALARL 124
Db 44 FLVSNF-VPGCGFLVGLIDFWKGIQV---SQMDAPLVQLEQLINERIAFARNAALANL 99
Qy 125 QGLGDSFRAYQGLSDWLENRDARTSVLYTOYIALEDFLNAMPFAIRNOEVPILMV 184
Db 100 EGLGNFNIVYEAFAKEBEDPNPNPATRTVIDRFRILDGLERDIPFAISGEFVPLSV 159
Qy 185 YQAANLHILLLDASLFGSEFGLTQEOIORYTEROVEDQRDYSDYEVENVYNGINSLRG 244
Db 160 YQAANLHILLLDSDYVFGERWGLYTNVENNRLRIHIDEADHCAANTYNGINLPLK 219
Qy 245 TNASAVRYNQPRDITLGLDLVALFPSTYRTYPTINTSAQLTREYVTDAGATGVNMA 304
Db 220 STYQDITTKRLRDLTLTYDLIAFPENDARKRPYQVGLTREYVTDPL-----INFN 275
Qy 305 SMMVYNNNAFSAIFTAIVASPHLLDFLEQLTIFSTSSWSASATRHNTYWRGHTIOSRPT 364
Db 276 POLQSAVQLPFTFVNMESAIKRNPHLDILNNLTITFTD--WFSVGRNFYVGGHVISLLI 332
Qy 365 GGLANTSTGHTSTISINPVLSFFSRDYVTESYAGVL---WGYLEIHGYPTVREN 420
Db 333 GGGNITSPIYGRANOEPPRSFTFNGVFEFTLSNPTRLQOQWPAAPFNRLRGVEGEFES 392
Qy 421 FRNPQTFE---RGTANYSQPYESPGQLKQDSETELPETTERPNVESYHRLSHIGLIS 477
Db 393 --TPNLSFTYRGKGV-----DSLTELPEEDNSVPRDEGISHRLCHATLVQ 436
Qy 478 QSRVHV---PVYSWTHRSADRNTTISDSITQIPVKSFNLSGTSVVGPGFTGDI 533
Db 437 RSGTFLTTGVVSWTHRSATLTNTIDPERINQIPVKGFRVWGTSVITGPGFTGDI 496
Qy 534 RTNVNGSVLSMGLNPNNTSLQRYRVRYAASQ-----TMVLRYTVGGSTTFDQGFPS 586
Db 497 RRTTFDGFVSLQVNIINSPIQRYRLRFRYASSDARVILYLGASGVGVQVSVNMPLOK 556
Qy 587 TMSANSLTQSFRFAFP-----VGISAGSQFAGISISNAGRGQFHFPHKIE 635
Db 557 TMEIGENLSKTRTYDFSNPSPFRANPDITIGISEQPLFAG-SISG---ELYIDKIE 611
Qy 636 FIPITATFEAYDLERAQKAVNALFTNTNPRBLKTDVTDVHIDOVSNLVACLSPEDLDE 695
Db 612 IILADATFEASDLERAQKAVNALFTSSNQLGKTDVTDVHIDOVSNLVDCLSPEDLDE 671
Qy 696 KRELLEKVKYAKRLSDERNLLQDPNFTSINKQDPFISTNEQSNFTSIHESHEGMCSEN 755
Db 672 KRELSEKVKAKRLSDERNLLQDPNFRGINRQDP-----RGMRGSTD 713
Qy 756 ITIOEGNDVFKENYVTLPGTPNECYPTLYLQKIGESLAKATRYQLRGYIEDSODLEIYL 815
Db 714 ITIOGGDVKENYVTLPGTVDECYPTLYLQKIDESLAKATRYELRGYIEDSODLEIYL 773
Qy 816 IRYNAKHETLDVPGTESVMPLESVSPIGRGEPRNCAPHFEMNPDLDSCRDGEKCAHNS 875

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Db 774 IRNNAHEIYVNGVGTSLWPLSAQSPGKCGEENRCAPHLEWNPDLDCSCRDEKCAHHS 833  
Qy 876 HHESLIDIDGCTDLHENLGVWVVFVKIKTOEGHARLGNLEFIEEKPPLGELASHVKAEEK 935  
Db 834 HHTTLDIDVGCCTDLNEDLGWVVFVKIKTOEGHARLGNLEFIEEKPPLGELASHVKAEEK 893  
Qy 936 WRDKREKLOETIRYVTEAKEAVDALFVDSQVNRLOADTNIGMTHADKLVHRIREAYLS 995  
Db 894 WRDKREKLOETIRYVTEAKEAVDALFVDSQVNRLOADTNIGMTHADKLVHRIREAYLS 953  
Qy 996 ELSVIGVNAAEIPEELBGRITTAISLYDARNVKNQDFFNGLACWVKGHVYD-QQSHR 1054  
Db 954 ELSVIGVNAAEIPEELBGRITTAISLYDARNVKNQDFFNGLACWVKGHVYDQSHNR 1013  
Qy 1055 SVLVIVEMEAESQAVRVCGRGYIIRVTAAYKGYGECCTTIEIENNDDELKFKACEE 1114  
Db 1014 SVLVIVEMEAESQAVRVCGRGYIIRVTAAYKGYGECCTTIEIENNDDELKFKACEE 1073  
Qy 1115 EYVPTDGTGNDYTA----HOGTAVCNRNAGYEDAYEVDYTTASVNYKPTYEETTYDVR 1170  
Db 1074 EYVPTDGTGNDYTA----HOGTAVCNRNAGYEDAYEVDYTTASVNYKPTYEETTYDVR 1131  
Qy 1171 RDNHCEYDRGVYVYPLPAGYMTKELEYFPEYDKWMEIGETGKFLVDSVELLMEE 1228  
Db 1132 RENCPSNRGYDYTLPAGYMTKELEYFPEYDKWMEIGETGKFLVDSVELLMEE 1189

## RESULT 11

US-10-200-522-2  
Sequence 2, Application US/10200522  
Publication No. US20030195336A1  
GENERAL INFORMATION:  
APPLICANT: Baum, Amy Jelen  
APPLICANT: Gilmert, James A.  
APPLICANT: Mettus, Amy Jelen  
TITLE OF INVENTION: POLYPEPTIDES  
FILE REFERENCE: MECO:213 (11792,0213 DVUS01)  
CURRENT APPLICATION NUMBER: US/10/200,522  
PRIOR FILING DATE: 2002-07-22  
PRIOR APPLICATION NUMBER: 09/337,280  
PRIOR FILING DATE: 1999-06-22  
PRIOR APPLICATION NUMBER: 08/980,071  
PRIOR FILING DATE: 1997-11-26  
PRIOR APPLICATION NUMBER: 08/757,536  
PRIOR FILING DATE: 1996-11-27  
NUMBER OF SEQ ID NOS: 76  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 2  
LENGTH: 1189  
TYPE: PRY  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Recombinant Delta Endotoxin  
US-10-200-522-2

Query Match 54.0%; Score 3500.5; DB 14; Length 1189;  
Best Local Similarity 57.0%; Pred. No. 2.8e-259; Indels 109; Gaps 20;  
Matches 717; Conservative 143; Mismatches 289;  
Qy 7 NENEIIT--NALSIPAVSNHSTOMDLSPADIEDSLCIAEGNNINPLVASASTVOTGINIAG 64  
Db 5 NQNGCIYVNCIS-----NPEBVLDDOERISTGN-----SSIDISLSLVQ 43  
Qy 65 RILGCVGPVPAQGIASYSFLVGLMVRGDDWEIFLEHVBOLINOITENAKNTALAKL 124  
Db 44 FLVSNF-VFGGFLVGLIDFVWGVGP---SQWDAFLVQIEOLINERIASFARVAALANL 99  
Qy 125 OGAGDSFRAVQOGLDLENRDAPRTSVLYTOYIALDLPLWAMPFLAIRNOGVPLLVY 184  
Db 100 EGLGNPNFIYVEAFKWEEDPNNPATIRIVIDRRILDGLERDIPSFALSGFEVPLLSV 159

Qy 185 YAOANLHLLLRDASLBSSEFGLTSQEIQRYYERQEVQTRVSDYCVEMNTGLNSLRG 244  
Db 160 YAOANLHLLLRDASLBSSEFGLTSQEIQRYYERQEVQTRVSDYCVEMNTGLNSLRG 219  
Qy 245 TNAASVVRNPFRRDITGLVLDVALFPGYDRTTYINTSAQLTRVYTDALGATGVNMA 304  
Db 220 STYQDMITNRLRRDITGLVLDVALFPGYDRTTYINTSAQLTRVYTDALGATGVNMA 275  
Qy 305 SNMNNNNPSSFAIETAVIRSPHLIDLEQLTIFSTSSRWSATRMWYRHTIOSRPI 364  
Db 276 POLQSAQPLTFVWESSAIRNPHLEFDILNNTLITFD---WFSVGNRFVWGGHVVSSLI 332  
Qy 365 GGGALNTSHGNTSINPRLSFSRDYWTESYAGVL---WGLYLEPIHGVPTVREN 420  
Db 333 GGGALNTSHGNTSINPRLSFSRDYWTESYAGVL---WGLYLEPIHGVPTVREN 392  
Qy 421 FNPQNTPE---RGATNYSQPYESPCLQKDSBELPETERPNYESHRLSHIGLIS 477  
Db 393 ---TPTNSFTYRGRGV-----DSLTLEPPEEDNSVPPREGYSHRLCHATFVQ 436  
Qy 478 QSRVHV----PYSWTHRSADRNTTISDSITQIPLVKSFNLSGTSVSGPFTGDI 533  
Db 437 RSGTPELTTGVVFSWTHRSATLNTIDPERINQIPLVKGFRVWGTSVITGPGFTGDI 496  
Qy 534 RTVNGSVLSMGLNFNTSLQRYRVRYAASQ-----TWLRTYVGGSTTFDGFPS 586  
Db 497 RRTFDPFVSLQVNIINSPIYTORLRFYASSDARIVLTGAATGVGGQVSVNMPLOK 556  
Qy 587 TMSANESLTSQSPFAEPF-----VGISAGSQTAGISISNNAQRQTFHPDKIE 635  
Db 557 THEIGENLTSRTRYDYDFGNPFRANPOLIGISEBPLGAG-SISG---ELYIDKIE 611  
Qy 636 FIPIATFEAYDLERAQAVNALFTNTNPRILKTVDYHIDQVNLVACLSDEFCLDE 695  
Db 612 IILADATFAESDLERAQAVNALFTSSNQIGLKTVDYHIDQVNLVACLSDEFCLDE 671  
Qy 696 KRELKRYKARLSEBRLDOPNPTSINKOPDFTSTBQSNFTSIHESBHGWSSEN 755  
Db 672 KRELSEKVRHAKRLSEBRLDOPNFRGINRDPD-----RGMGSTD 713  
Qy 756 ITIOGNDVFKENYVTLPGTFNECYPTYLYOKIGSESELKAYTYQLRGYEDSQDEIYL 815  
Db 714 ITIOGNDVFKENYVTLPGTFNECYPTYLYOKIGSESELKAYTYQLRGYEDSQDEIYL 773  
Qy 816 IRNNAHEIYVNGVGTSLWPLSAQSPGKCGEENRCAPHLEWNPDLDCSCRDEKCAHHS 875  
Db 774 IRNNAHEIYVNGVGTSLWPLSAQSPGKCGEENRCAPHLEWNPDLDCSCRDEKCAHHS 833  
Qy 876 HHESLIDIDGCTDLHENLGVWVVFVKIKTOEGHARLGNLEFIEEKPPLGELASHVKAEEK 935  
Db 834 HHTTLDIDVGCCTDLNEDLGWVVFVKIKTOEGHARLGNLEFIEEKPPLGELASHVKAEEK 893  
Qy 936 WRDKREKLOETIRYVTEAKEAVDALFVDSQVNRLOADTNIGMTHADKLVHRIREAYLS 995  
Db 894 WRDKREKLOETIRYVTEAKEAVDALFVDSQVNRLOADTNIGMTHADKLVHRIREAYLS 953  
Qy 996 ELSVIGVNAAEIPEELBGRITTAISLYDARNVKNQDFFNGLACWVKGHVYD-QQSHR 1054  
Db 954 ELSVIGVNAAEIPEELBGRITTAISLYDARNVKNQDFFNGLACWVKGHVYDQSHNR 1013  
Qy 1055 SVLVIVEMEAESQAVRVCGRGYIIRVTAAYKGYGECCTTIEIENNDDELKFKACEE 1114  
Db 1014 SVLVIVEMEAESQAVRVCGRGYIIRVTAAYKGYGECCTTIEIENNDDELKFKACEE 1073  
Qy 1115 EYVPTDGTGNDYTA----HOGTAVCNRNAGYEDAYEVDYTTASVNYKPTYEETTYDVR 1170  
Db 1074 EYVPTDGTGNDYTA----HOGTAVCNRNAGYEDAYEVDYTTASVNYKPTYEETTYDVR 1131  
Qy 1171 RDNHCEYDRGVYVYPLPAGYMTKELEYFPEYDKWMEIGETGKFLVDSVELLMEE 1228  
Db 1132 RENCPSNRGYDYTLPAGYMTKELEYFPEYDKWMEIGETGKFLVDSVELLMEE 1189



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RESULT 12
US-09-972-175-61
; Sequence 61, Application US/09972175
; Publication No. US20030101482A1
; GENERAL INFORMATION:
; APPLICANT: Baum, James A.
;           Gilmer, Amy Jelen
;           Mettue, Anne-Marie Light
; TITLE OF INVENTION: TRANSGENIC PLANTS EXPRESSING
;                     LEPIDOPTERAN-ACTIVE-DELTA-ENDOTOXINS
; NUMBER OF SEQUENCES: 76
; CORRESPONDENCE ADDRESS:
;   ADDRESS: Arnold, White & Durkee
;   STREET: P.O. Box 4433
;   CITY: Houston
;   STATE: Texas
;   COUNTRY: USA
;   ZIP: 77210
; COMPUTER READABLE FORM:
;   MEDIUM TYPE: Floppy disk
;   COMPUTER: IBM PC compatible
;   OPERATING SYSTEM: PC-DOS/MS-DOS
;   SOFTWARE: Patent Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
;   APPLICATION NUMBER: US/09/972,175
;   FILING DATE: 05-Oct-2001
;   CLASSIFICATION: <Unknown>
;   PRIORITY APPLICATION DATA:
;     APPLICATION NUMBER: 09/337,635
;     FILING DATE: <Unknown>
;   ATTORNEY/AGENT INFORMATION:
;     NAME: Kitchell, Barbara S.
;     REGISTRATION NUMBER: 33,928
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE: 512/418-3000
;       TELEFAX: 512/474-7577
; INFORMATION FOR SEQ ID NO: 61:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 1189 amino acids
;     TYPE: amino acid
;     TOPOLOGY: linear
;     MOLECULE TYPE: protein
;     SEQUENCE DESCRIPTION: SEQ ID NO: 61:
US-09-972-175-61

Query Match      54.0%; Score 3496.5; DB 10; Length 1189;
Best Local Similarity 56.9%; Pred. No. 5.8e-259;
Matches 716; Conservative 143; Mismatches 290; Indels 109; Gaps 20;

QY 7 NENEII--NALSI PAVSNHSTOMDLSPARIEDSLCIAEGNNINPLVASTVGTGINAG 64
DB 5 NQNGCI PYNCL-----NPEVIL DGERISTGN-----SSIDISLSLVQ 43
QY 65 RILGVLCVPFAGQIASFYSLVGLMFRGDQEIFLEHVEQLINQITENANNTALARL 124
DB 44 FLVSNF-VPGGFLVGLIDFVWGIVGP---SQWDAFLVQIEQLINERIAEFARNAALANL 99
QY 125 OGIGDSFPAVQOSLEMDLENRDARSRVLYTOYIALMELDFLAMPLFAIRNOEVLAMY 164
DB 100 EGGNNFNIVFAEKWEEDPNPAPTRRVIDRRIIDGLLEDDIPSFDISGFEVPLSLV 159
QY 185 YQAQANLHLILLADSLFGSBEFLTSOEIQRYERQVEQTRDYSQVCEVWYNTGLNSLRG 244
DB 160 YQAQANLHLILLADSLVIFGGRMGLTTINVENTNRLRIHIDEADHCANTYNGLNLP 219
QY 245 TNAASVVRNQFRDLITGLVDLVALFSPYDTRTYPIINTSAQJTRVYTDAIGATGVNMA 304
DB 220 STYQDMITVRLRLRDLITGLDIAAFEPNPNDRYPIQPVGQLTRVYTDPL----INFN 275
QY 305 SMMWYNNMNPSPSAIEFAVRSPLHLDPLFQULTIFSSWSMSATRHMTYRGHTIQSRPI 364
DB 276 POLQSVAGLFTFVWESSAIRNPHLFDLIINLITFTD---WFSVGRNFWYGRHVISLSLI 332

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QY 365 GGGINTSTHGSTNTSINPVLSPFSRDVWTESTYAGVL-----WGITYLEIHGVPTVREN 420
DB 333 GGGNITSPYGRBANQPPRSFTFNGVFRLLSNPTRLILQOPAPAPPNLRGVEGVFS 392
QY 421 FRNPQTFE---RGTANYSQPYESPGLQKDSFELPPETTERPNVSYSHLSHIGLIS 477
DB 393 --TPTNSFTYGRGTV-----DSLTEPPENSVPRRGYSHRLCHATFVQ 436
QY 478 QSRVHV-----PVYSWTRSDARTNTISSDSITQIPLVKSFNLSNGTSVSGPGFTGGDI 533
DB 437 RSGTFLITGVVPSWTRSATLNTITPERINQPLVKGRVWGTSVITGPGFTGGDIL 496
QY 534 RTVNGSVLSMGLNFNNTSLQRYRVRYAASQ-----TMVJRYVGSSTTPOGPPS 586
DB 497 RRTVFGDFVSLQVWINSPITQRYLRFRYAASSRDARIVLTGAASTGVGGGVNMPLOK 556
QY 587 TMSANESTISQSPFAEP-----VGISASSQTAGISISNNAGQTFHPKIE 635
DB 557 TMEIGENLTSTRFTYTDPSNPFSFRANDIIGISEQPLFGAG-SISSG---ELYIDKIE 611
QY 636 FIPITATFEABYDLERAQAVNALFTNTNPRRLKTDVTDHIDQVSNLVACLSDPECLDE 695
DB 612 IILADATFEABSDLERQAKVNALFTSSNOIGLKTVDYTHIDQVSNLVCLSDPECLDE 671
QY 696 KRELLEKYAKRLSDERNLLODPNFTSINKOPDFTSTNOSNFTSIHQSEHQMGSEN 755
DB 672 KRELSEKYAKAKLSDERNLLODPNFRGINRQD-----RMRGSTD 713
QY 756 ITIOGNDVFKENYVTLPGTFNRCYPTLYLOKIGESLAKYTRYQLAGYIEDSODLEIYL 815
DB 714 ITIOGNDVFKENYVTLPGTVDECYPTLYLOKIDESLAKYTRYELRGYIEDSODLEIYL 773
QY 816 IRVNAKHETLDVPGTESWPLSVESPIGRGCEPRNCAHPHEMNDLDCSRDGEKCAHS 875
DB 774 IRVNAKHETLVNPGTSLMPLSAOSPIGKCGEPRNCAHPHEMNDLDCSCDGEKCAHS 833
QY 876 HHSLSLDIDICTLHENVGVVVFVKITQBGHARLGNLEFIEEPLIGELASRYKRAEK 935
DB 834 HHFTLDIDVCTDLNEDLGWVVFVKITQBGHARLGNLEFIEEPLIGELALARYKRAEK 893
QY 936 WRDKREKLETKRYVTEAEAVDALFVDSQYRNLQDNTNIGMHAADKLVHRIREAYLS 995
DB 894 WRDKREKLETKRYVTEAEAVDALFVNSQYRLQDNTNIGMHAADKLVHRIREAYLP 953
QY 996 ELSVIEGVNARIFEELGRITITASLYDARNVKNQGFNNGLCAWNVKGVHDV-QQSHHR 1054
DB 954 ELSVIEGVNARIFEELGRITITASLYDARNVKNQGFNNGLCAWNVKGVHDVEQNNHR 1013
QY 1055 SVLVIEBMEAEVSOAVRCPGRGYILRVTAKEGYGECVTIHEINNTDELKFKNCEE 1114
DB 1014 SVLVIEBMEAEVSOAVRCPGRGYILRVTAKEGYGECVTIHEINNTDELKFKNCEE 1073
QY 1115 EYVPTDGTGNDYTA---HGTAVCNRNAGYEDAVEYDTTASVNYKPYEETTYDVR 1170
DB 1074 EYVPMNTVTTCNNTYQGEYEGT--YTSRNQGYDEADGANNPSPADYASVYEKSYTDGR 1131
QY 1171 RDNHCEYDRGVNVVPLPAGVMTKELEYPEPTQWTEIGETGKFTVDSVELLAME 1228
DB 1132 RNPCESNRNGYGYTPLPAGVMTKLEYPEPTQWTEIGETGKFTVDSVELLAME 1189

RESULT 13
US-10-200-522-61
; Sequence 61, Application US/10200522
; Publication No. US20030195336A1
; GENERAL INFORMATION:
; APPLICANT: Baum, James A.
;           Gilmer, Amy Jelen
;           Mettue, Anne Marie Light
; TITLE OF INVENTION: NUCLEIC ACID AND POLYPEPTIDE COMPOSITIONS ENCODING LEPIDOPTERAN-TR
; FILE REFERENCE: MECO:213 (11792.0213 DVUS01)

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CURRENT APPLICATION NUMBER: US/10/200,522
CURRENT FILING DATE: 2002-07-22
PRIOR APPLICATION NUMBER: 09/337,280
PRIOR FILING DATE: 1999-06-22
PRIOR APPLICATION NUMBER: 08/980,071
PRIOR FILING DATE: 1997-11-26
PRIOR APPLICATION NUMBER: 08/757,536
PRIOR FILING DATE: 1996-11-27
NUMBER OF SEQ ID NOS: 76
SOFTWARE: Patent version 3.1
SEQ ID NO 61
LENGTH: 1189
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Recombinant Delta Endotoxin
US-10-200-522-61

Query Match      54.0%; Score 3496.5; DB 14; Length 1189;
Best Local Similarity 56.9%; Pred. No. 5.8e-259;
Matches 716; Conservative 143; Mismatches 290; Indels 109; Gaps 20;

QY 7 NENEII--NALSTPAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVASTVGTGINIAG 64
DB 5 NQNOCLPYNCLN-----NPEVLDGERISTGN-----SSIDISLSLVQ 43
QY 65 RIIGVLGVPPAGQIASFYSFLVGLMPPRGDWEIFLEHVEQLINQITENANTALARL 124
DB 44 FLVSNF-VFEGGFLVGLIDFVWGIVGP---SQMDARFLVQEQLINERIAEPANMAIANL 99
QY 125 QGLGDSFRAYQOGLBWLMDLRDARTRSVLTYQYIALELDFLAMPFAIRNOEVLPMV 184
DB 100 EGLGNFNIVYEAFLKEWEDPNPNPATRTVIDRFRLDGLERIDISFDISGFEVPLASV 159
QY 185 YAAANLHLALLDASLFGSEFGLTSGEIQRYTEROVEDQNDSDVCEVEMNTGSLNLRG 244
DB 160 YAAANLHLALLDSDVYIFGERWGLTITNENYNRLRHIDEVADHCANTYNGLNLLPA 219
QY 245 TNASVWRVYQFRRDLTLGLDVALFPSTYDRTYPTINTSAQLTREYVTDAGATGVNMA 304
DB 220 STYQDMITTYRRLRDLTLVLDIAAPFPNDNRPIQPGQULTRVYDPL-----INFN 275
QY 305 SMMWNNNNAFSFSAIETAVIRSPHLLDFLEQLTIFSTSSWSATRHMTYWRGHTIOSRPI 364
DB 276 PQLOSVAQLETFVNMESSAIRNPHLEFDILNNLTIFTD---WFSVGRFPYGCGRVVISLI 332
QY 365 GGLGINTSTHSTNTSINPVLSFSPSRDYVYTESAGVL---WGYLEIHGVPTVYREN 420
DB 333 GGGNITSPIYGRANOEPPRSFTFNGVFPTLSNPTLRLLQOPWAPAPFNLRGVEGEVFS 392
QY 421 FRNPONTFE---RGTANYSQPYESPGLQDKOSETELPPTTERPNVESYSHRLSHIGLIS 477
DB 393 --TFPNTSFTYRKGCTV-----DSLTELPEPNDSVPPRGRGYHRLCHATFVQ 436
QY 478 QSRVHV---PVYSWTHRSADRTNTISSDSITQIPLVKSFNLSGTSVSGPGFTGDI 533
DB 437 RSGTPELFTTSVSPWTHRSATLTNTTIDPERINQIPLVKGKRVGSGTSVITGPGFTGDI 496
QY 534 RTVNVGSLVSMGINTPNTSLORRYRVRYVAAQ-----TMLRLVYVGSSTFPGQFPS 586
DB 497 RRTPTGDFVSLQVNIINSPTQRYRLRFRVASSRDARVITLGAAGTGGQVQVNNPQOK 556
QY 587 TMSANESLTSQSFRPAFFP-----VGISASGSGTQAGISINNAKQTFHFPIKIE 635
DB 557 TMEIGENULTSRTRYDFTSNPFRANPDILIGISEQLPFGAG-SISGG-----ELIYDKIE 611
QY 636 FIDITATFEAYDLERAQEAVNALFTNTPRRLKTTDVTYHIDQVSNLVACLSDDEFCLDE 695
DB 612 IILADATFEAESDLERAQKAVNALFTSSNOIGLKTVDYHIDQVSNLVACLSDDEFCLDE 671
QY 696 KRELLEVYKAKXKLSDRNLQDPNFTSINKOPFISTEQSNFTS.IHESHGKMGSEN 755
DB 672 KRELSEKVKAKRISDERNLLQDPNFRGINRQPD-----RGMWGSTD 713

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QY 756 ITIOEGNDVFKENYVTLPGTFNECEPTYLYOKIGSESLKAYTRYQLRGYIEDSQDLEIYL 815
DB 714 ITIOGGDDVFKENYVTLPGTVDECEPTYLYOKIDESKLKAYTRYELRGYIEDSQDLEIYL 773
QY 816 IRYNAGHETLDVPGTESWPLVESPIGRCEGERNRCAPHEWNPDPDSCCRDEKCAHNS 875
DB 774 IRYNAGHELVNVPGTSLMPLSAQSPIGKCGERNRCAPHEWNPDPDSCCRDEKCAHNS 833
QY 876 HPSLIDIDIGCTDHNELGMVWVFKITQOEGHARLGNLFIEBKPLLGELSLKVAEKK 935
DB 834 HHFTLDIDVCTDHNELGMVWVFKITQDGHARLGNLFIEBKPLLGELSLKVAEKK 893
QY 936 WDRKREKQLETKRYVYTAKEAVDALFVDSQYNRLQADTNIGMHAADKLVRHIREAYLS 995
DB 894 WDRKREKQLETNIVYKAKESVDALFVNSQYDRLQVDTNIMAHADKRVHIREAYLP 953
QY 996 ELSTVPGVNAALFEELEGRITRAISLYDARNYKNDPNNGLACMWKGVHVD--QOSHR 1054
DB 954 ELSTVPGVNAALFEELEGRIFAYISLYDARNYKNDPNNGLACMWKGVHVEQNNHR 1013
QY 1055 SVLVIPMEAEVSOAVRCPGRGYILRTVAYKEGYGECVTHIEINNTDELKFKACEER 1114
DB 1014 SVLVIPMEAEVSOAVRCPGRGYILRTVAYKEGYGECVTHIEINNTDELKFKSCVEE 1073
QY 1115 EYVPTDGTGNDYTA---HQTAVCSNAGYEDAYEVDTTASVNYKPTVEEYTYDVR 1170
DB 1074 EYVFNNTVTCNNYTGQBEYEGT--YTSRNOGYDEAYGNPNVPADYASVYEKSYTDGR 1131
QY 1171 RDNHCEYDGYVNYPPPLPAGNMTKELEFPENDKWIIEIGETGKRIYDSVELLMEE 1228
DB 1132 RNPCEBNSRNGYGDYTPLPAGYVTKDLEYPETDKWIEIGETGTFIVDSVELLMEE 1189

RESULT 14
US-10-782-020-7
Sequence 7, Application US/10782020
Publication No. US20040197916A1
GENERAL INFORMATION:
APPLICANT: Carozzi, Nadine
APPLICANT: Hargiss, Tracy
APPLICANT: Koziele, Michael G.
APPLICANT: Duck, Nicholas B.
TITLE OF INVENTION: Axi-004, A Delta-Endotoxin Gene and
TITLE OF INVENTION: Methods for Its Use
FILE REFERENCE: 045600/274139
CURRENT APPLICATION NUMBER: US/10/782,020
CURRENT FILING DATE: 2004-02-19
PRIOR APPLICATION NUMBER: 60/448,810
PRIOR FILING DATE: 2003-02-20
NUMBER OF SEQ ID NOS: 11
SOFTWARE: PaateSeq for Windows Version 4.0
SEQ ID NO 7
LENGTH: 1189
TYPE: PRT
ORGANISM: Bacillus thuringiensis
US-10-782-020-7

Query Match      54.0%; Score 3495.5; DB 16; Length 1189;
Best Local Similarity 56.9%; Pred. No. 6.9e-259;
Matches 716; Conservative 143; Mismatches 290; Indels 109; Gaps 20;

QY 7 NENEII--NALSTPAVSNHSTQMDLSPDARIEDSLCIAEGNNINPLVASTVGTGINIAG 64
DB 5 NQNOCLPYNCLN-----NPEVLDGERISTGN-----SSIDISLSLVQ 43
QY 65 RIIGVLGVPPAGQIASFYSFLVGLMPPRGDWEIFLEHVEQLINQITENANTALARL 124
DB 44 FLVSNF-VFEGGFLVGLIDFVWGIVGP---SQMDARFLVQEQLINERIAEPANMAIANL 99
QY 125 QGLGDSFRAYQOGLBWLMDLRDARTRSVLTYQYIALELDFLAMPFAIRNOEVLPMV 184

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Db      100 EGLGNPNIVYEA FKWEEDPNPATRTVYIDRFRIIDGLLENDIPSFRISGEFVPLLSV 159
Qy      185 YAAANLHLILLDLASLFGSEFGLTSGEIQRYERQVEQTRDYSVCVEMYNTGLNSLRG 244
      160 YAAANLHLILLDLASLFGSEFGLTSGEIQRYERQVEQTRDYSVCVEMYNTGLNSLRG 219
Qy      245 TNAASVRNQFRRDLTGLVDLVALPSPYDTRTPYINTSAQLTRREYTDALGATGVNMA 304
      220 STYQDMITTYRRLRDLTLTVLDIAAFPNYDNRYPYIQPVGQLTRREYTDPL----INFN 275
Qy      305 SMMNNNNNPPSAITFAIVRSPHILDFLEQLTIFSSRMSASATRHMTYRGHTIOSRPI 364
      276 POLQSAVQLPFTVNMESSAIRNPHILFDILNNLTFTD---WFSVGRNFTYGGHNVISLI 332
Qy      365 GGGGLNTSTGSTNTSINPVLSPFSRDVWTESYAGVL---WGIYLBHGVPTVRFN 420
      333 GGGNITSPYGRANQEPSPFSFTNGVFRLLSNPTRLRLQOPAPAPFNLREGEVGFES 392
Qy      421 FRNPQTFE---RGTANYSQPYESPGLQLKDSSTELPPTTERPNYESYHRLSHIGLIS 477
      393 --TPTNSFTYRGKGV-----DSLTELPEEDNSVPPREGYSHRLCHATFVQ 436
Qy      478 QSRVHV-----PYSWTHRSADRTNTTSSDSITQPLVKSFNLSGTSVSGPFTGDI 533
      437 RSGTPELTGTVSWTHRSATLTNTIDPERINQPLVKGFRWGGTSVITGPGFTGDI 496
Qy      534 RTNVNGSVLSMGLNFNTSLQRYRVRVYASQ-----TWLRYTVGGSTTFDQGFPS 586
      497 RRATPGDFVSLQVNIINSPIQRYRLFRVYASSDARVIVLTGAASVGVGVVNNPDLQK 556
Qy      587 TMSANSLTSQSFRFAFP-----VGISASGSGTAGISISNNAGROTFFHPKIE 635
      557 TMEIGRLTSRTFRYDPSNPFSPRANPDIGISEQPLFGAG--SISG---ELYIDKIE 611
Qy      636 FIFITATFEAYQLERAOEAVNALPTNTNPRRLKTDTVDYHIDQVSLVACLSDPECLDE 695
      612 IILADITFEASDLERQAKVNALFTSSNOIGLKTDTVDYHIDQVSLVACLSDPECLDE 671
Qy      696 KRELLEKVKYAKKLSDERNLLQDPNFTSINKOPDFTSTNEQSNTSITHEOSEHGMWSEN 755
      672 KRELSEKVKYAKKLSDERNLLQDPNFTSINKOPDFTSTNEQSNTSITHEOSEHGMWSEN 713
Qy      756 ITTQESNDVFKENYVTLPGTFNECYPTLYLQKIGESLKA YTRYQLRGYIEDSODLEIYL 815
      714 ITTQESNDVFKENYVTLPGTFNECYPTLYLQKIGESLKA YTRYQLRGYIEDSODLEIYL 773
Qy      816 IRNNAHETLDVGTSTVPLSVESPRIGRGEPRNCA PHFEMNPDLDCSGRDEKCAHNS 875
      774 IRNNAHETLDVGTSTVPLSVESPRIGRGEPRNCA PHFEMNPDLDCSGRDEKCAHNS 833
Qy      876 HHFSLDIDIGCTDLHENLGVWVFKITQOGHARLGNLEFIEEKPLLGELSLVYKRAEKK 935
      834 HHFTLIDIVGCTDLNEDLGWVFKITQOGHARLGNLEFIEEKPLLGELSLVYKRAEKK 893
Qy      936 WRDKREKLOETKRYVTEAKEAVDALFVDSQYRLQADTNI GMIHAADKLVRHIREAYLS 995
      894 WRDKREKLOETKRYVTEAKEAVDALFVDSQYRLQADTNI GMIHAADKLVRHIREAYLS 953
Qy      996 ELISVIGVNAEIEELLEGRIITAI SLYDANVYKNGDFNNGLACMNVKGVADV--QGSNHR 1054
      954 ELISVIGVNAEIEELLEGRIITAI SLYDANVYKNGDFNNGLACMNVKGVADV--QGSNHR 1013
Qy      1055 SYLVIVIEWEAEVSOAVRVCGRGYILRVATYKGYGBCVTHIEIENNTDELKPKNCEEE 1114
      1014 SYLVIVIEWEAEVSOAVRVCGRGYILRVATYKGYGBCVTHIEIENNTDELKPKNCEEE 1073
Qy      1115 EYVPTDGTGNDYTA---HOGTAVCNSRNAGYEDAYEVDTTASVNYKPTYEEETVDV 1170
      1074 EYVPTDGTGNDYTA---HOGTAVCNSRNAGYEDAYEVDTTASVNYKPTYEEETVDV 1131
Qy      1171 RDNHCEYDGVYVYVPLPAGYVTKLEYLPETDKWAEIETEGKPIVDSVEILLME 1228
      1132 RDNHCEYDGVYVYVPLPAGYVTKLEYLPETDKWAEIETEGKPIVDSVEILLME 1189

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RESULT 15
US-10-926-819-9
; Sequence 9, Application US/10926819
; Publication No. US20050049410A1
; GENERAL INFORMATION:
; APPLICANT: Carozzi, Nadine
; APPLICANT: Hargies, Tracy
; APPLICANT: Koziel, Michael G.
; APPLICANT: Duck, Nicholas B.
; APPLICANT: Carr, Brian
; TITLE OF INVENTION: AXM1-003, A Delta-Endotoxin Gene and
; TITLE OF INVENTION: Methods for Its Use
; FILE REFERENCE: 045600/281577
; CURRENT APPLICATION NUMBER: US/10/926,819
; PRIOR FILING DATE: 2004-08-26
; PRIOR APPLICATION NUMBER: 60/498,518
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 1189
; TYPE: PRN
; ORGANISM: Bacillus thuringiensis
US-10-926-819-9

Query Match      54.0%; Score 3495.5; DB 17; Length 1189;
Best Local Similarity 56.9%; Pred. No. 6,9e-259;
Matches 716; Conservative 143; Mismatches 290; Indels 109; Gaps 20;

Qy      7 NENEII--NALSI PAVSNHSTOMDLSPDARIEDSLCIAEGNNINPLVASTVGTGINIAG 64
      5 NQNCIFPNCLT-----NDESVLDOERISTGN-----SSIDISLVQ 43
Db      65 RIIGVLGVPPAGGATASFTSLVSELWPRGRDQVEIFLHVEQLINQOITNNAKTALAK 124
      44 FLVSNF--VPGGGLVGLIDVWGVIVP---SQWDAFLVQIQLINERIAEFARNAALANL 99
Qy      125 OGAGDSFRAVQOSLEMLNENRDAFTRSVLYTQYIALDELFLNAMPFAIRNOEVPILWV 184
      100 EGLGNPNIVYEA FKWEEDPNPATRTVYIDRFRIIDGLLENDIPSFRISGEFVPLLSV 159
Db      185 YAAANLHLILLDLASLFGSEFGLTSGEIQRYERQVEQTRDYSVCVEMYNTGLNSLRG 244
      160 YAAANLHLILLDLASLFGSEFGLTSGEIQRYERQVEQTRDYSVCVEMYNTGLNSLRG 219
Qy      245 TNAASVRNQFRRDLTGLVDLVALPSPYDTRTPYINTSAQLTRREYTDALGATGVNMA 304
      220 STYQDMITTYRRLRDLTLTVLDIAAFPNYDNRYPYIQPVGQLTRREYTDPL----INFN 275
Qy      305 SMMNNNNNPPSAITFAIVRSPHILDFLEQLTIFSSRMSASATRHMTYRGHTIOSRPI 364
      276 POLQSAVQLPFTVNMESSAIRNPHILFDILNNLTFTD---WFSVGRNFTYGGHNVISLI 332
Qy      365 GGGGLNTSTGSTNTSINPVLSPFSRDVWTESYAGVL---WGIYLBHGVPTVRFN 420
      333 GGGNITSPYGRANQEPSPFSFTNGVFRLLSNPTRLRLQOPAPAPFNLREGEVGFES 392
Qy      421 FRNPQTFE---RGTANYSQPYESPGLQLKDSSTELPPTTERPNYESYHRLSHIGLIS 477
      393 --TPTNSFTYRGKGV-----DSLTELPEEDNSVPPREGYSHRLCHATFVQ 436
Qy      478 QSRVHV-----PYSWTHRSADRTNTTSSDSITQPLVKSFNLSGTSVSGPFTGDI 533
      437 RSGTPELTGTVSWTHRSATLTNTIDPERINQPLVKGFRWGGTSVITGPGFTGDI 496
Qy      534 RTNVNGSVLSMGLNFNTSLQRYRVRVYASQ-----TWLRYTVGGSTTFDQGFPS 586
      497 RRATPGDFVSLQVNIINSPIQRYRLFRVYASSDARVIVLTGAASVGVGVVNNPDLQK 556
Qy      587 TMSANSLTSQSFRFAFP-----VGISASGSGTAGISISNNAGROTFFHPKIE 635

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Db 557 TWEIGENLISRTTRYTDFSNPFSFRANPDIGISBOPLFAG-SISSG----ELYIDKIE 611
Qy 636 FIPITATPEAEYDLERAQEAVALFTNTNPRRLKTDVTDYHIDQVSNLVACLSDFCCLDE 695
Db 612 IILADATPEAESDLERAQKAVNALFTSSNIGLKTVDYTHIDQVSNLVCLSDFCCLDE 671
Qy 696 KRELLEKVKYAKRLSDERNLLQDPNFTSINKOPDFTSNEQSNFTSIHEQSEHGWSSEN 755
Db 672 KRELSEKVKYAKRLSDERNLLQDPNFRGINRQPD-----RGMWGSTD 713
Qy 756 ITIOEGNDVPEKENVTLPGTFNECYPTLYOKIGESELKAYTRYOLRGYIEDSODLEIYL 815
Db 714 ITIOGSDVPEKENVTLPGTFNECYPTLYOKIDESKAKAYTRYELRGYIEDSODLEIYL 773
Qy 816 IRYNAKHETLDVPGTESVWPLSVESPIGRGCEPNRCAPHFEMNPDLDSCSRDEKCAHHS 875
Db 774 IRYNAKHETLVNPGTSLWPLSAQSPIGKGEFNRCAPHLENNPDLDSCSRDEKCAHHS 833
Qy 876 HHPSLDIDIGCTDLHENLGVWVVKITQDGHARLGNLBEIERKPLIGELSRVKAEEK 935
Db 834 HHFTLDIDVGTDLNEDLGWVIFKIKTQDGHARLGNLBEIERKPLIGELSRVKAEEK 893
Qy 936 WRDKREKLOJETRKYTEAKAVALFVDSQVNRLOADTNIGMTHADKLVHRIREAYLS 995
Db 894 WRDKREKLOJETNIVYKEAESVDALFVNSQYDLQVDTNIMITHADKRVHRIREAYLP 953
Qy 996 ELSVIRGVNAEIFEELLEGRIITTAISLYDARNVYNGDFNNGLACWNYKGVHDV-QOSSHHR 1054
Db 954 ELSVIRGVNAIIFEELEGRIFTAISLYDARNVIKNGDFNNGLACWNYKGVHDVEBQNNHR 1013
Qy 1055 SVLVIPMEAEVSQAVRVCPRGYIILRVTA YKGYGECVTYIHEIENNTDELKPKCEE 1114
Db 1014 SVLVIPMEAEVSQAEVRVCPRGYILRVTA YKGYGECVTYIHEIEDNTDELKFSNCVEE 1073
Qy 1115 EYVPTDGTGNDYTA---HOGTAVCNSRNAGYEDAYEVDTTASVNYKPTYEBEYTDVR 1170
Db 1074 EYVFNNTVTCNNYITGOEYEGT--YTSRNOGIDEAGNNPSVPADYASVYEKSYTDGR 1131
Qy 1171 RDNHCEYDRGYVYVPLPAGYMTKELEYPPETDKVWIEIGETBGFIVDSVELLMEE 1228
Db 1132 REMPCESNRGYGYTPLPAGYVTKDLEYFPETDKVWIEIGETGTFIVDSVELLMEE 1189
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Search completed: May 24, 2005, 14:26:32  
Job time : 197 secs